

**The effect of sense of belonging and adjustment on undergraduate students' intention to
dropout of university**

by

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DECLARATION

I, Vivian Bongani Mtshweni (student no: 51416387), declare that the dissertation entitled **“The effect of sense of belonging and adjustment on undergraduate students’ intention to dropout of university”** is my own work and that all the sources that I have used or quoted have been indicated and acknowledged by means of complete references. I further declare that I have not previously submitted this work, or part of it, for examination at UNISA for another qualification or at any other institution of higher learning.

Vivian Bongani Mtshweni

26-06-2019

SIGNATURE

DATE

DEDICATION

This dissertation is dedicated to my beloved parents.

My mother: A strong and gentle character who taught me not to give up on my dreams. Your love and patience have been very inspirational. Thank you my companion! 😊

My late father: Your love and wisdom were enough to keep me going. Thank you for teaching me the value of education. May your soul continue to rest in peace, *Ndala!*

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LIST OF ABBREVIATIONS AND ACRONYMS

AMOS	Analysis of a Moment Structures
APA	American Psychological Association
CPQ	College Persistence Questionnaire
LGBT	Lesbian, Gay, Bisexual and Transgender
PSSM	Psychological Sense of School Membership
SACQ	Student Adaptation to College Questionnaire
SPSS	Statistical Package for the Social Sciences
SRC	Student Representative Council
UNISA	University of South Africa

ABSTRACT

Although the participation of students at institutions of higher learning in South Africa is increasing, student dropout remains a challenge. Student dropout is influenced by a variety of factors, some of which are psychological. The purpose of this study was to investigate the role of adjustment and sense of belonging on students' intention to dropout of university. The study comprised of three distinctive objectives. The first objective of the study was to examine the relationship between sense of belonging, adjustment and students' intention to drop out of university. Second, the study sought to test whether sense of belonging and adjustment would predict students' intention to dropout of university. Finally, the study sought to test whether students' socioeconomic status would moderate the relationship between sense of belonging and intention to dropout of university. The sample for the study consisted of 955 students enrolled for undergraduate programmes for the 2018 academic year. Pearson correlation, multiple linear regression and moderation analysis were used to test hypotheses stated in the study. The findings revealed a statistically significant relationship between sense of belonging, adjustment and the intention to dropout. The findings also confirmed that sense of belonging and adjustment predict the intention to dropout. However, the study could not prove the hypothesis that socioeconomic status moderates the relationship between sense of belonging and the intention to dropout. Nevertheless, the findings of this study highlighted the importance of psychological factors on undergraduate students' academic success. Thus, universities should consider initiating programmes that will address students' psychological challenges throughout their enrolment at university to improve student retention and rates of graduation.

Key terms: Adjustment, Background characteristics, historically advantaged students, historically disadvantaged students, intention to dropout, psychological factors, sense of belonging, socioeconomic status, success, support

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CHAPTER I

INTRODUCTION

1.1. Background

The rates of student participation at institutions of higher learning in South Africa are on the rise. Reports indicate that the rates have increased from 15% in 2000 to 18% in 2010 (Council on Higher Education, 2013; Department of Higher Education and Training, 2012). In 2019, the participation rates were reported by Coetzee (2019) to be approximately just below 20%. The participation rates are further expected to increase in the next ten years, with a target of 23% by 2030. Despite the projected increase, institutions of higher learning continue to encounter numerous challenges, one of which is student dropout (Panther, 2018).

Student dropout is a serious challenge for most universities in South Africa and this has been the case for a number of years. In 2005, the Department of Higher Education and Training reported that of the 120 000 students who enrolled at institutions of higher learning in 2000, 30% of them abandoned their studies within their first year of studies (Department of Higher Education and Training, 2005). Furthermore, 20% of the initial 120 000 students dropped out of university during their second year of studies (Department of Higher Education and Training, 2005). In subsequent years, as reported by Letseka and Maile (2008), it emerged that the rate of dropout at some universities in South Africa was as high as 80%. In addition, Van Zyl (2015) reported that around 50% to 60% of undergraduate students in institutions of higher learning dropout during their first year of studies. Despite the efforts made by the Department of Higher Education and Training, through the National Plan for Higher Education (NPHE) to reduce dropout, universities continue to experience high rates of dropout (Moneyweb, 2009; Nkosi, 2016).

Studies have revealed that students that are likely to drop out of university in South Africa are from historically disadvantaged groups¹, with low-income families and less educated families (Fiske & Ladd, 2004; University World News, 2007). Mkhabela and Malan (2004) reported that 40% of historically disadvantaged students drop out of university each year. In addition, Mdaka (2016) reported that 32.1 % of historically disadvantaged students drop out of the university after their first year of study. A comparison of the rate of graduation of historically disadvantaged students to those historically advantaged² reveals that the overall rate for historically advantaged students is almost 40% higher than that of historically disadvantaged students (Council on Higher Education, 2012). In addition, reports by Nomdo (2017) and Raborife (2017) also suggest a continuing trend of student dropout at institutions of higher learning in South Africa and that historically disadvantaged students are mostly likely students to dropout compared to their historically advantaged counterparts. According to the Council on Higher Education (2013), this constitutes lack of equity and has major and negative effects on social and economic development.

Research indicates that several socio-economic factors such as finances, social class and poverty are linked to student dropout (Fiske & Ladd, 2004; Mutambara & Bhebe, 2012). However, these factors are not comprehensive in predicting dropout since there are other additional factors that have also been found to predict dropout (Alkan, 2016). Research shows that psychological factors also play a significant role in student dropout (Khan, 2017). A study by Jemal (2012) revealed that some students abandon their studies for psychological reasons. Sense of belonging and adjustment are some of the factors that have been identified to play a role in student dropout (Alkan, 2016; Mohamed, 2012).

¹ Historically disadvantaged students refers to university students from previously marginalised South African racial groups, such as Black, Coloured and Indian students.

² Historically advantaged students refers to university students from white racial groups.

According to Hurtado & Carter (1997) and Louise (2010), sense of belonging and adjustment to the university environment are important predictors of student dropout. This is particularly the case with undergraduate students who have shown to have a major challenge in terms of dealing with the transition and adjusting to university (Al-Khatib, Awamleh, & Samawi, 2012; Al-shinawi & Abdurrahman, 1994). According to Strayhorn (2012), lack of sense of belonging to university has been found to lead to negative outcomes such as lack of fit to the university. Quiamzade, Jury, & Mugny (2015) refer to lack of fit to university as students' inconsistencies with the culture, practices and identity of institutions, which can result in students dropping out of the institution.

Research also shows that students drop out of university because of challenges associated with adjusting to university life (Sommer & Dumont, 2011; Tom, 2015). This implies that sense of belonging and adjustment are essential for the educational success of university students. Given the suspected role of sense of belonging and adjustment on student dropout, the current study, therefore, sought to investigate the effect of sense of belonging and adjustment on students' intention to dropout among university students.

1.2. Statement of the problem

The promotion and prioritisation of attaining tertiary education is important for the well-being of a country's economy (Huang, 2012). However, in South Africa, attaining a university degree remains a challenge for many students (Letseka & Maile, 2008). Although a number of students make it to university, majority abandon their studies (Latif, Choudhary, & Hammayun, 2015; Singh & Moodley, 2015). According to Jones, Coetzee, Bailey, & Wickham (2008), dropout is more pronounced among undergraduate students because of the multiple challenges they are confronted with during their transition to university.

The transition to university is associated with numerous challenges. Firstly, students are expected to adjust to new methods of teaching and learning at university (Sommer, 2013). Secondly, students have to establish new relationships with peers and lecturers and also engage in social and academic activities (e.g., study groups or discussion forums). Thirdly, students have to endure the stress and physical discomforts of being in a new learning environment (Sommer, 2013). Lastly, some students may have to deal with financial stress due to lack of basic academic requirements such as textbooks or even tuition fees. Although some students may be able to cope with these transitional challenges, some find it difficult and experience adjustment problems (Jones et al., 2008; Sommer, 2013). In addition, these challenges also make it difficult for some students to fit or belong in the learning environment (Jackson, 2016). Researchers suggest that the inability to belong and adjust to a new learning context is problematic since it induces feelings of anxiety, stress, isolation, loneliness and alienation, which could in turn decrease students' commitment to university (Gerdes & Mallinckrodt, 1994; Osterman, 2000; Pittman & Richmond, 2008). Lack of commitment to university may lead the student to dropout of university (Tinto, 1975, 1993).

Student dropout is one of the well-researched topics in academic circles worldwide and has received attention for many years (Cortes, 2012; Tinto, 1975). However, literature reveals that there are few studies on student dropout in South Africa (Marrison, 2011). This is despite the high rates of dropout reported at tertiary institutions (Department of Higher Education and Training, 2005; Mdaka, 2016; Van Zyl, 2015). Moreover, available literature on university student dropout in South Africa has focused more on external and environmental factors contributing to dropout (Cortes, 2012; McGhie, 2012). Additional evidence also suggests that research in South Africa has focused more on dropout by postgraduate students and factors affecting graduation and dropout rates (Murray, 2014; Stayger, Van Vuuren, & Heymans,

2015). Research on the effect of sense of belonging and adjustment on students' intention to dropout of university in South Africa is limited. Therefore, in a quest to address the gap, the current study seeks to contribute to literature by investigating the effect of sense of belonging and adjustment on the intention to dropout of university.

1.3. Purpose and objectives of the study

Previous research reveals that psychological factors play an important role in student's educational success (Osterman, 2000; Pittman & Richmond, 2008; Sommer, 2013). Thus, the main purpose of this study was to investigate the role of adjustment and sense of belonging on students' intention to dropout of university. The objectives of the study were to: examine the relationship between sense of belonging, adjustment and students' intention to drop out of university, test if sense of belonging and adjustment can predict students' intention to dropout of university; and test whether students' socioeconomic status moderates the relationship between sense of belonging and intention to dropout of university.

1.4. Research questions

The following research questions were asked in the study:

R₁: Is there a significant relationship between sense of belonging, adjustment and students' intention to drop out of university?

R₂: Does sense of belonging and adjustment predict students' intention to drop out of university? and

R₃: Does the socioeconomic status of students moderate the relationship between sense of belonging and intention to drop out of university?

1.5. Outline of chapters

The study is divided as follows:

Chapter one: Introduction

This chapter provides the background of the study, the statement of the problem, the purpose and objectives of the study as well as the questions that the study seeks answer.

Chapter two: Literature review

The chapter focuses on the literature review, the theory that informed the study and a discussion of variables examined in this study.

Chapter three: Research design and methodology

This chapter provides a discussion on the purpose, aims and the objectives of the study. It also provides a discussion on the research paradigm, the ontology, epistemology as well as axiological assumptions. Furthermore, a discussion on cross-sectional survey, population, sampling and sampling size, research setting and context, research instruments, data analysis and ethical considerations as applicable in the study is provided.

Chapter four: Results

This chapter focuses on the demographic characteristics of respondents and presentation of results as informed by the research questions and the hypotheses.

Chapter five: Discussion

This chapter provides a discussion of the findings for each hypothesis. The chapter also focuses on the limitations of the study, implications for theory and for practice as well as the recommendations for future studies.

1.6. Summary of chapter

This chapter has provided the introduction to the study, the background, statement of the problem, purpose and objectives of the study, research questions underpinning the study and the structure of the study. The next chapter is the literature review.

CHAPTER II

LITERATURE REVIEW

2.1. Introduction

The purpose of the literature review in this study is to introduce sense of belonging and adjustment considered to be related to the intention to dropout in previous studies, present additional factors that may be related to the intention to dropout (i.e. students' socioeconomic status) and describe a moderation model in which the potential relationship between sense of belonging and intention to dropout could be moderated by the socioeconomic status of students.

2.2. Psychological factors previously found to be related to intention to dropout

2.2.1. Sense of belonging

Sense of belonging has been conceptualised in various ways. Osterman (2000, p. 324) defines it as “a feeling that members matter to one another and to the group, and a shared faith that members' needs will be met through their commitment to be together”. According to Bollen and Hoyle (1990), sense of belonging is fundamental to members' identification with a group and has numerous consequences on behaviour. Research has revealed that sense of belonging is a basic human need, important for human functioning and critical in the psychological wellbeing of individuals (Baumeister & Leary, 1995; Maslow, 1954, 1962; Strayhorn, 2012). In the educational context, Gooednow (1993) defines the concept as the extent to which students feel personally accepted, respected, included and supported by others in the university environment.

Baumeister and Leary (1995) claim that sense of belonging has multiple and strong effects on emotional patterns and on cognitive processes. In addition, sense of belonging

contains both cognitive and affective elements in that individuals' cognitive evaluation of their role in relation to a group may result in an effective response (Hurtado & Carter, 1997). Thus, satisfying the need to belong could result in positive emotions such as joy, calmness and happiness in life (Baumeister & Leary, 1995).

Sense of belonging could positively motivate students to stay committed to university and enable successful completion of their degree programmes (Strayhorn, 2012; Tovar & Simon, 2010). The literature further highlights that sense of belonging is beneficial in a number of ways. According to Rovai and Wighting (2005), individuals who experience a strong sense of belonging, tend to be better adjusted, feel supported, have connections to goals that may be above their aspirations, have stronger levels of social support and social connectedness. In addition, sense of belonging can act as a buffer against threats, help individuals to deal with changes and difficulties in society at large (Rovai & Wighting, 2005).

Researchers acknowledge the importance and positive effect of sense of belonging on diverse human interactions (Hausmann, Feifei, Woods, & Schofield, 2009; Kember, Lee, & Li, 2001; Strayhorn, 2012). In contrast, however, researchers also agree that insufficient belonging needs could result in negative and adverse consequences (Jackson, 2016; Strayhorn, 2012, 2016). According to Baumeister and Leary (1995), lack of belonging needs can lead to negative affect and pathology. Furthermore, the deprivation of belonging needs can drive individuals to display a variety of ill effects such as maladjustment. Weiss (1973) also adds that absence of sense of belonging often leads to diminished interest and engagement in ordinary life activities. In the case of university students, insufficient belonging needs may result in adjustment difficulties, which could contribute or increase the chances of dropout.

2.2.2. Sense of belonging to the university

Sense of belonging has been studied extensively as an important psychological factor in the success of university students (Baumeister & Leary, 1995; Jackson, 2016; Strayhorn, 2012; Weiss, 1973; Xin, 2003). Combs (1982) states that successful student learning depends on a number of factors, one of which is the feeling of belonging or being cared for. Jackson (2016) considers sense of belonging as a connection that students feel towards their university, peers and academic faculty. According to Jacoby and Garland (2005), sense of belonging reflects the social support that students perceive on campus; it is a feeling of connectedness to others and that one matters to the university environment (Taylor, Turner, Noymer, Beckett, & Elliott, 2001).

Xin (2003) suggests that sense of belonging is important in the university environment as it has the potential to encourage students to stay committed to their studies. In addition, Hausmann, Feifei, Woods and Schofield (2009) state that sense of belonging plays a crucial role in learning spaces because it increases students' persistence and commitment to university. This is because by being accepted, included and welcomed, students develop positive emotions and attitudes towards the university, which could in turn increase their connectedness to the university (Osterman, 2000). Other studies by Beyers and Goossens (2002); Levett-Jones and Lathlean (2009); Tao, Dong, Pratt, Hunsberger and Pancer (2000) revealed that feeling connected to a university is linked to low dropout rates. In support of the above argument, Berger (1997) also found that sense of belonging to the learning environment is related to students' decision to continue enrolment.

Sense of belonging is a basic human need and plays an important role in the success of students. However, sense of belonging, if inadequate, could negatively impact on the success of university students. Feelings of not belonging to an educational context can have an adverse effect on students' success by prompting a need to dropout (Dean, 1961; Heisserer and Parrete,

2002). Furthermore, Fine (1991) also identified that sense of belonging has a direct influence on student dropout. Finn (1989) argues that sense of belonging is important in ensuring the completion of degree programmes and that unless students identify well with their academic institutions, their education will always be limited. Tinto (1975, 1995) also suggests that students who feel that they do not belong to a particular learning environment, tend to fail in finding a satisfactory niche in the academic setting; this failure to find a niche may then compel them to abandon their studies.

Understanding students' sense of belonging may be crucial to understanding how particular forms of social and academic experiences affect university students (Hurtado & Carter, 1997). Kember, Lee and Li (2001) consider sense of belonging as an essential psychological factor that determines whether students complete their programme or dropout of university. Leithwood and Aitken (1995) posit that when the learning environment does not provide the student with belonging needs, such student will experience a gradual disengagement and diminished interest in academic activities, and ultimately, decide to drop out of the university.

Pittman and Richmond (2008) state that universities serve as potential environments in which students can find a sense of belonging. According to Strayhorn (2012), students who have stronger perceptions of university belonging, have a greater likelihood of completing their studies, however, students with less stronger perceptions of university belonging, are more prone to dropping out. In addition, Schlosser (1992) found that students whose educational contexts emphasised sense of belonging, were more likely, compared with those whose educational contexts did not emphasise the sense of belonging, to continue enrolling and complete their studies. This means that, in order for students to be successful at university, they must feel that they are part of the university (Strayhorn, 2016). Therefore, in order for

students to develop a sense of belonging, it is crucial that they feel as part of a learning community where their contributions add to a common knowledge pool and where a community spirit is fostered through social interactions (Rovai & Wighting, 2005).

2.2.3. Adjustment

Adjustment has been conceptualised in various ways by a number of scholars. Toheed (2012) defines adjustment as a process of altering one's behaviour to reach a harmonious relationship with the environment as a result of some type of change that has occurred. Al-ananni (2005) conceptualises it as a behaviour directed to overcome obstacles used by people to fulfil their needs and satisfy motives, as well as reducing pressure to achieve balance and satisfaction. Al-azza (2004) considers adjustment as the behavioural process by which humans try to maintain an equilibrium among their various needs or between their needs and obstacles of their environment. According to Halonen and Santrock (1997), adjustment assists individuals to cope and manage the problems they encounter. Thus, adjustment is a psychological cushion that allows individuals to successfully enter a novel task or new situation with less discomfort, while at the same time, advocating a smooth adaptation into new circumstances.

2.2.4. Adjustment to university

Adjustment to university is a multidimensional aspect that can be divided into four different domains such as academic, social, personal-emotional adjustment and attachment to the university (Baker & Siryk, 1999). This means that students entering university have to adjust to different forms of requirements simultaneously (Sommer, 2013). According to Baker and Siryk (1999), social adjustment refers to the interpersonal-societal demands of the university environment, and academic adjustment reflects a students' success at coping with various educational demand characteristics of the university environment. In addition,

personal-emotional adjustment is the extent to which students experience psychological distress and physical illness, whereas attachment to the university refers to students' satisfaction with the university experience in general and with the particular university that they are attending (Baker & Siryk, 1999). Research has revealed that all the dimensions of adjustment are equally important and when fulfilled, can lead to positive outcomes among university students.

2.2.5. Academic adjustment

Academic adjustment involves a student's ability to make an effort to meet academic challenges in order to find satisfaction in the academic environment (Baker & Siryk, 1984). According to Stan and Cazan (2015), academic adjustment reflects a fit which students achieve in the university environment, and encompasses a student's motivation and willingness to learn, taking actions to meet academic demands, clear goal-settings and general satisfaction with the academic environment (Baker & Siryk, 1989). Stan and Cazan (2015) consider academic adjustment to be the expression of the positive reaction of students to the pressure of academic demands. Abdullah, Elias, Mahyuddin and Uli (2009) posit that academic adjustment to university is important in that it affords students the will to succeed and complete their studies.

During their transition to university, students encounter multiple challenges. These challenges include handling of academic demands in the form of multiple workloads, getting used to the curriculum and methods of teaching and learning. Additionally, students are expected to develop relationships with the teaching staff and also develop their own style of working independently (Jones et al., 2008). In some cases, students may also be expected to learn and finish the syllabus at a quicker pace. Although some students may find this experience relatively manageable, to some, however, this experience can be overwhelming and make their adjustment to university more difficult (Tinto, 1975, 1987).

Lapsley and Edgerton (2002) posit that when students cannot deal with the overwhelming university experience, they experience challenges which negatively affects their academic success. Tinto (1993) highlights that in some situations, the experience is difficult and some students abandon their studies without giving themselves a chance to adjust to the demands of tertiary life. Academic adjustment to university life is critical for the academic success of students as failure to adjust could contribute to poor academic performance and eventual dropout decisions (Adler et al., 2008; Tinto, 1993). In their study on the preparedness of students for higher education, Lowe and Cook (2003) found that majority of students experienced considerable difficulty adjusting academically to university, thus resulting in underperformance and a significant number of student dropout. These findings necessitate the role of universities in assisting students to adjust academically to the learning environment in order to complete their studies.

2.2.6. Social adjustment

The transition from high school or from work to university exposes students to a novel environment with new practices. During this transition period, some students are expected to engage and socialise with other racial groups and to acclimatise themselves to the social environment of the university (Atinde, 2014; Jones et al., 2008). Depending on the medium of learning (i.e. contact, part-time or distance learning), the socialisation process may involve among other things, joining students' campus unions, assignments or study groups, online discussion forums, university-based mentorship support groups, establishing rapport with the university faculty staff and joining community learning clubs. These forms of socialisation may help the students to formulate their social identity, find a niche in their various social

environments of the university and contribute to a high quality learning experience (Badu-Nyarko, 2010).

Attending university requires students to adjust socially to the university environment (Tinto, 1993). This is because the ability to adjust in this regard may result in the increased need of students to focus their attention on academic work and decreased need to drop out of university (Beyers & Goossens, 2002; Wlazelek & Coulter, 1999). According to Dyson and Rank (2006), social adjustment to university is important and can be assessed in terms of how well students function in their immediate environment, participation in social activities and their satisfaction with a number of aspects of the university experience. This may involve among other things, making new friends either through online platforms or proximity interactions (Al-Hattami & Al-Ahdal, 2014; Badu-Nyarko, 2010).

Baker and Siryk (1999) are of the conviction that high levels of social adjustment are an indication that a student is successful in coping with interpersonal and social demands of the university. In addition, Mutambara and Bhebe (2012) consider social adjustment as an important factor during students' transition to university. This is because social adjustment is fundamental for undergraduate students who are engaged in the process of self-discovery and individualisation.

Monroe (2009) highlights that social adjustment to university has been found to have an association with students' overall adjustment to university. Additionally, social adjustment serves to motivate students to succeed educationally. This implies that social adjustment to university is necessary because it can result in increased academic participation and also allow students to develop a positive attitude towards university. Woosley (2003) proposes that students who perceive themselves to be adjusting well to university and are satisfied with the manner in which they socialise during their first year of university, are more likely to complete their studies. Kadar (2001) adds that the quicker the student gets involved and feels connected

to the university, the increased likelihood of continuation with the degree and reduced need to dropout.

Kantanis (1995) posits that students tend to encounter great difficulties at university if they fail to adjust to the social spaces and demands of university. Landow (2006) points out that failure to adjust may lead students to exhibit negative emotional experiences which may eventually engender dropout decisions. Thus, it is essential to encourage students to utilise different forms of socialisation in order to adjust socially to their learning institution as this may enable them to reach their academic goals and succeed at university.

2.2.7. Personal-emotional adjustment

Personal-emotional adjustment involves the psychological distress and somatic symptoms associated with adjusting to university (Mutambara & Bhebe, 2012). This is a form of an adaptation process which comprises psychological and physical anxiety when students adjust to the university environment (Baker & Siryk, 1999). According to Rienties, Beusaert, Grohnert, Niemantsverdriet and Kommers (2011), personal-emotional adjustment reflects a degree of students' adaptation to the personal and emotional manner of their educational life.

The shift to university poses a number of psychological demands to university students. Chickering (1986) identified that the process to university is marked by complex emotional adjustment difficulties. In addition, Mohamed (2012) argues that during this period, a major challenge facing undergraduate university students is the management and safeguarding of their psychological and physical well-being due to having to deal with multiple changes simultaneously.

Adjusting to the university can be a stressful event for some students, and this is mainly due to the unfamiliarity of the university environment which often requires students to unlearn and learn new ways of coping in a new environment. Crede and Niehorster (2012) state that

novel university students are required to navigate a new environment, develop an orientation towards the institution, become productive members of the university and adapt to new roles and responsibilities. For example, in some instances, students have to learn the customs, norms and values of the new environment, whereas in other educational circumstances, students may have to learn to spend most of their time on their academic work and less time on leisure activities. This may lead to increased psychological distress such as anxiety (Nordstrom, Goguen, & Hiester, 2014), which may in turn make the personal-emotional adjustment of the student to university difficult (Gerdes & Mallinckrodt, 1994). According to Gerdes & Mallinckrodt (1994) and Tinto (1993), some students find ways to make the transition constructively and adapt to university environment, whereas others fail to meet the demands of their new roles in the novel environment.

The inability of students to adjust personally and emotionally to university may lead to negative educational outcomes. Noel, Levitz and Saluri (1985) claim that psychological stressors have been found to predispose students to withdraw from their studies. Furthermore, Tinto (1987) demonstrates that difficulties with emotional adjustment to university and emotional distress increase the possibility of university dropout. A number of scholars have also pointed out that students with emotional adjustment difficulties are likely to transfer to another university or discontinue enrolment altogether (Daugherty & Lane, 1999; Gerdes & Mallinckrodt, 1994; Trotter & Cove, 2005; Wintre & Bowers, 2007).

Students' decision to abandon their studies may be linked to their experience at university. Studies indicate that institutional experiences affects students' decision to dropout (Tinto, 1975; Valri-Gold, Deming, Callah, Mangram, & Errico, 1998) and this includes the manner in which students adjust personally and emotionally to their university (Baker & Siryk, 1989). Thus, fostering personal-emotional adjustment among university students is important as it may assist them to cope with university demands for them to complete their studies.

2.2.8. Institutional attachment

Institutional attachment indicates a students' level of attachment associated with attending university, their satisfaction with the university and their commitment towards achieving their academic goals (Sommer, 2013); it is a student's commitment to personal educational and occupational goals (Tinto, 1993). Tinto (1993) further adds that institutional attachment is a reflection of students' commitment to the institution or university in which they are a part. According to Tinto (1993), institutional attachment indicates the degree to which one is willing to work towards the attainment of goals within his or her specific learning environment. Baker and Siryk (1999) add that institutional attachment refers to students' degree of commitment to educational–institutional goals and the degree of attachment to a particular institution they are attending.

Universities encourage students to be attached to the institution because institutional attachment heightens productivity and reduce dropout (Davidson, Beck, & Grisaffe, 2015; Luchak & Gellatly, 2007; Mitchell, Gallaway, Millikan, & Bell, 2011). Attachment to the university is important in determining between students who are likely to stay and those who are likely to leave the institution (Baker & Siryk, 1984; Tinto, 1993). Studies indicate that students with high levels of institutional attachment are more likely to complete their studies and less likely to drop out of their institutions of learning (Baker & Siryk, 1984; Beyers & Goossens, 2002). Furthermore, Mallette and Cabrera (1991) claim that the greater the attachment and commitment to university, the greater the likelihood of continuing with enrolment.

Institutional attachment may result in an increased will to stay committed to academic activities up to the completion of the degree. However, insufficient levels of attachment to the institution may result in student dropout. Bean and Metzner (1985) argue that students may drop out of university despite their high academic performance if they perceive low levels of

institutional attachment. Furthermore, research suggests that individuals who are willing to leave their environment are more likely to have a lower level of attachment to the environment in which they are living (Kelly & Hosking, 2008).

Studies also indicate that the learning environment plays an important role in students' decisions to dropout. Students' lack fit or the incompatibility experienced by students at the university may lead to dissatisfaction and a decreased institutional commitment, which could, in turn, result in dropout (Schertzer & Schertzer, 2004; Sorey & Duggan, 2008; Strauss & Volkwein, 2004). In the same way, students' successful adjustment into the university environment may influence their commitment to the institution thus, leading to continued enrolment (Leslie, Charles, & Valorie, 2013). These findings demonstrate that institutional attachment occupies an important part in the success of university students and therefore, the need for institutions of higher learning to develop models that will enhance or increase students' attachment levels toward the university and decrease dropout rates.

2.2.9. Adjustment to university in the South African context

Several studies on adjustment have been conducted in South Africa (Petersen, Louw, & Dumont, 2009; Petersen, Louw, Dumont, & Malope, 2010; Silinda, 2017; Sommer, 2013; Sommer & Dumont, 2011). For example, (Petersen et al., 2009; Sommer, 2013) conducted their studies on adjustment and academic performance. In addition, the scholars conducted their studies in residential institutions and predominantly with students from disadvantaged backgrounds. The studies revealed that adjustment to university is important for academic performance and that adjustment contributes to students' educational success (Petersen et al., 2009; Sommer, 2013). In the quest to contribute to literature, the current study focuses on adjustment and the intention to dropout, however, with students from different socioeconomic backgrounds. Thus, the current study extends from previous studies in that it focuses on students from different socioeconomic backgrounds. Therefore, this will shed an

understanding in terms of how adjustment affects the educational success of students from different backgrounds.

Silinda (2017) also conducted a study measuring academic adjustment and social adjustment among undergraduate students. The results of the study indicated that academic adjustment was a consistent predictor and mediator of academic persistence (Silinda, 2017). The current study however, contributes to literature and extends from previous studies in that the researcher measures adjustment from different dimensions (i.e. Social, academic, personal-emotional and institutional attachment). This implies that the current study will contribute to literature by measuring adjustment from different dimensions and also demonstrate the effect of adjustment on students' intention to drop out of university.

2.3. Intention to dropout

Bobko (2001) considers intention to dropout as a decision-making process from the preliminary thinking about leaving the institutions to the actual behaviour of leaving the institution. Bean and Metzner (1985) consider the intention to dropout as the expression of one's desire to leave university that is a strong predictor of actual departure decisions. According to Cortes (2012), students who express the intention to drop out of university may eventually drop out and contribute to high dropout rates. Rossmann and Kirk (1970) and Tinto (1993) suggest that individual intentions are important predictors of the likelihood of completing a degree or dropping out.

Tinto (1993) states that individual intentions to drop out of university are not always clear because they sometimes change due to the students' needs in the learning environment. In addition, Tinto (1993) suggests that to understand the role of individual intentions in institutional departure, one has to determine the specificity, stability and clarity of individual intentions. This is because students enter institutions of higher learning for different reasons. While a majority of students attend university in order to obtain a qualification, others simply

attend to gain additional occupational skills and learn a specific content area (Rossmann & Kirk, 1970; Tinto, 1993). Other students may choose to attend one particular university in order to transfer or gain entry to the institution of their first choice. This means that in some instances, the intent to drop out of university may exist from the moment a student starts to enrol at a particular institution of learning.

The intention to drop out of university is motivated by a number of factors in the learning environment. These factors include among others, the inability to adjust to the learning environment and failure to find a sense of belonging to the university (Adler et al., 2008; Landow, 2006; Leithwood & Aitken, 1995). In addition, Strayhorn (2012) and Tinto (1993) have demonstrated that undergraduate students are more susceptible to dropping out of university if they fail to find a sense of belonging and adjustment to university conditions. This means that low levels of sense of belonging and adjustment may influence students' intentions to dropout. In support of this, Cortes (2012), Fine (1991) and Wintre & Bowers (2007) posit that lack of sense of belonging and students' inability to adjust to the learning environment contribute to students' intention to dropout, and ultimately to student dropout. Therefore, in order to guard against the intentions to dropout, universities need to initiate programmes that will assist students to develop a sense of belonging and adjustment to university. This may motivate students to continue enrolling and complete their qualifications.

2.4. Students' socioeconomic status as a moderator variable

Socioeconomic status refers to a measure of one's economic standing in terms of education, income and occupation (Winkleby, Jutalis, Frank, & Fortmann, 1992). The Australian Bureau of Statistics (2011) considers socioeconomic status as the social and economic position of an individual within the society. The Australian Bureau of Statistics

(2011) maintains socioeconomic status can be measured through one's wealth, income, education, employment, household or family structure, the location or even demographics. The American Psychological Association (2007) defines socioeconomic status as the position of an individual or group on the socioeconomic scale, which is informed by a combination of social and economic factors such as income, education, occupation, place of residence in the society, ethnic and religious background. Maswikiti (2008) maintains this definition is also applicable to the South African context.

South Africa consists of diverse population groups with different socioeconomic backgrounds. These different socioeconomic backgrounds, to some extent, could be attributed to the apartheid system which sought to deny or limit economic opportunities to other population groups (Blacks, Coloureds and Indians) on the basis of race. White population groups, however, were advantaged in that they had full access to all economic opportunities, including access to quality education. De Villiers (1999) and Huysamen (2000) argue that the inability to access equal economic opportunities during the apartheid period has resulted in adverse consequences in that the majority of previously disadvantaged groups are still receiving poor quality education due to their low socioeconomic status.

A student's socioeconomic status is associated with numerous challenges for students at university. According to Mompremier (2009), socioeconomic status may have an effect on students' adjustment to university. Backhaus (2009) found that students from lower socioeconomic backgrounds tend to be less adjusted to university. In addition, Atinde (2014) is of the view that students from low socioeconomic status often fail to adjust to the institutional culture of the university due to their background characteristics. In their study on adjustment challenges at university, Sharma & Kermane (2015) found that students with low socioeconomic status have more adjustment problems compared to those with high socioeconomic status. Gerdes and Mallinckrodt (1994) are of the view that students who fail

to adjust to the learning environment, tend to drop out of university. Rice (1992) also found that undergraduate students with low levels of adjustment to university have higher dropout rates. This means that the socioeconomic status of students has an effect on their adjustment to university and could also lead them to abandoning their studies.

The socioeconomic status of students has also been found to be associated with students' sense of belonging to university (Ostrove & Long, 2007). According to Ostrove (2003), students with low socioeconomic status tend to feel alienated at university due to their insufficient sense of belonging to university. In addition, a study by Jury, Aelenei, Chen, Darnon, & Elliot (2019) revealed that low socioeconomic status students have a lower sense of belonging to university than those with high socioeconomic status. According to Jury et al. (2019), students with a low socioeconomic status are prone developing lack of sense of belonging to university life due to their limited access to resources. Chatman (2008) concurs with this assertion and maintains students with a low socioeconomic are the least likely to report feelings of sense of belonging to university. Lack of sense of belonging to university is most likely to result in negative outcomes, one of which is the intention to dropout (Strayhorn, 2012). Studies by Just (1999), Swail, Redd and Perna (2003) and Zea, Reisen, Beil and Caplan (1997) also revealed that the inability to belong in a learning institution contributes to the intentions dropout.

Sciancalepore (2017) found that students' socioeconomic status is related to their intentions dropout. Tinto (1975) is of the view that student dropout is a longitudinal process, motivated by several factors, one of which is the family background of students. Wells, Bechard and Hambly (2001) also found that the socioeconomic status of students contributes to their intention to drop out of university. Research reveals that factors such as parents' level of education, geographical area, demographics, family structure and parents' employment

contribute to students' decision not to continue their studies at university (Ginsberg & Miller-Cribbs, 2000; Rumberger, 2003; Wells et al., 2001).

Previous studies also reveal that university dropout is determined by pre-university circumstances of students such as the socioeconomic status of their families (Tinto, 1993). Sewell and Shah (1967) argue that students with poor socioeconomic status exhibit higher rates of dropout than those with high socioeconomic status, even when intelligence is taken into account. In addition, Sommer (2013) also points out that students from low socioeconomic backgrounds have the highest reported dropout rates compared to those from high socioeconomic backgrounds. This is due largely to their background conditions and the multiple challenges they have to endure during their transition to university.

Researchers support the above arguments and emphasise that students who are likely to complete their qualifications, often come from families where parents are educated, urban-based and affluent (Eckland, 1964; Spady, 1971; Tinto, 1975, 1993). This is an indication that socioeconomic status is important in supporting students to achieve their goals of higher education and completing their studies.

Since the socioeconomic status of students has the potential to determine whether they complete their studies or dropout before completion, the current study, therefore, sought to test the effect of a moderator variable (i.e. socioeconomic status) on the relationship between sense of belonging and the intention to dropout (H_3). That is, the study sought to investigate whether the relationship between sense of belonging and the intention to dropout could be moderated by the socioeconomic status of students. Figure 2.1 shows a moderation model of the relationship between sense of belonging and the intention to dropout with socioeconomic status as a moderator variable.

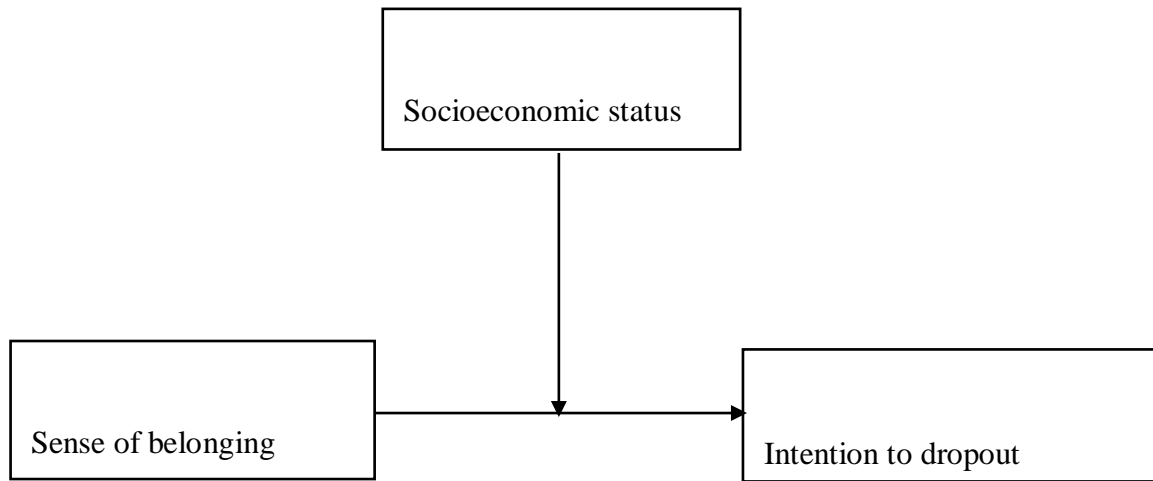


Figure 2.1: Relationship of sense of belonging to background status and the intention to dropout (Moderator model).

2.5. Theoretical framework

Strayhorn's (2012) theory of belonging informed this study. However, Tinto's Model of Institutional Departure (1975, 1993) was also considered in the study in order to explain some important elements of the study. In particular, Tinto's theory will be used as a framework for understanding students' adjustment to university. This is because Tinto's theory outlines in detail, students' adjustment process to university. The abovementioned theories are complementary in the context of this study in that they demonstrate institutional and psychosocial factors that affects students' success at university. Tinto's theory takes into account factors leading to students' adjustment to university whereas Strayhorn's theory provides an understanding of a sense of belonging in the university environment.

The theory of belonging as suggested by Strayhorn (2012) acknowledges the importance of sense of belonging in the academic context. In formulating his theory,

Strayhorn (2012) used a similar model to Maslow's theory of needs. Maslow's theory proposes that human needs are organised into a hierarchy, with the most basic needs placed at the bottom of the hierarchy and actualisation needs placed at the top of the hierarchy. The hierarchy is represented in the form of a pyramid or triangle. Maslow (1951) suggests that these needs are important for one's survival and that for an individual to attain higher needs on the hierarchy, they must first satisfy the basic needs on the lower level of the hierarchy. Maslow (1951) further posits that each need is important for human survival and that if the need is not met, an individual will constantly prioritise and strive to satisfy that need.

Similar to Maslow's (1951) theory of needs, Strayhorn (2012) provides an example that an individual's response to the need for belonging is similar to an individual's response to the physiological need for food; he emphasises that if the body lacks some nutrients or vitamins provided by food, an individual will develop an appetite for that missing element and will be highly motivated to satisfy the need. This implies that an individual will have to act and strive to satisfy the need for food.

Sense of belonging forms part of Maslow's theory and is located within the basic needs in the hierarchy. According to Strayhorn (2012), sense of belonging determines a person's behaviour across different contexts and is one of the important basic needs that defines his theoretical model. In his model, Strayhorn (2012) used Maslow's theory to emphasise the importance of the need to belong as it applies to students in various learning environments.

Jackson (2016) posits that Strayhorn's theory takes into consideration the human needs and translates them to how they work with university students. In the context of the higher education in South Africa, Strayhorn's theory is particularly suited for students from disadvantaged backgrounds because it takes into consideration their situations and circumstances (Jackson, 2016). Strayhorn (2012) postulates that the need to belong to a university is important because failure of students to find belongingness in the learning context

could lead to emotional withdrawal and eventual decisions to dropout. Similar to Maslow's theory of needs, if the university environment does not provide the student with the feeling of belonging and if students do not feel that they belong to the university community, they will leave the institution to seek belonging outside of the learning environment (Strayhorn, 2012).

In formulating his model to explain how students and why students abandon their studies, Strayhorn (2012) also includes physiological, safety and esteem needs as well as self-actualisation, with belonging needs placed in the middle of the hierarchy of needs. However, of all the needs included in his model, Strayhorn (2012) argues that sense of belonging takes on heightened importance. This means that sense of belonging is the most significant factor that serves as a determinant of students' behaviours and perceptions in academic spaces. Strayhorn (2012) further claims that if sense of belonging is gratified in the learning context, it may yield positive results, however, if the need to belong is not satisfied, it could result in negative outcomes on the student. Jackson (2016) is of the opinion that lack of belonging can lead to intention to dropout. This means that sense of belonging is not simply a want (Jackson, 2016), but a basic human need that plays a significant role not only in the success of university students, but also in an individual's daily experiences and across different contexts. Figure 2.2 provides a summary of the theory.

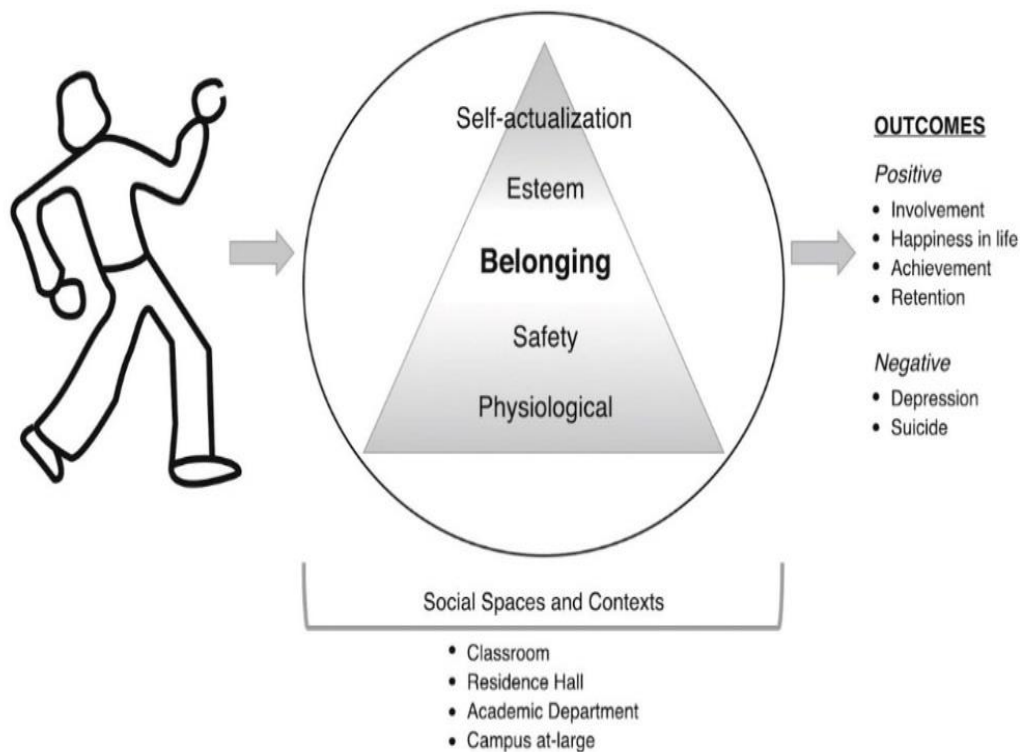


Figure 2.2: Strayhorn's (2012) hypothesised model of college students' sense of belonging. Reprinted from "College students' sense of belonging: a key to educational success for all students", (p. 25), by T. L. Strayhorn, 2012, New York, NY: Routledge, Taylor & Francis group. Reprinted with permission.

2.5.1. Core elements of Strayhorn's model of sense of belonging (2012)

In designing his theoretical model, Strayhorn (2012) proposed seven core elements of sense of belonging. The seven elements were derived from existing literature on sense of belonging as a basic and universal human need that applies to all people (Strayhorn, 2012).

The elements, as listed by (Strayhorn, 2012), are as follows:

Sense of belonging is a basic human need

This element implies that sense of belonging is universal and that all people yearn to belong and find acceptance from others (Strayhorn, 2016). Maslow (1962) suggests that satisfying a need to belong is necessary because it paves the way for higher order needs such as a desire for knowledge, understanding and self-actualisation. For example, in case of university students, the goal of attending university is primarily to obtain a qualification and to gain a specialised skill or knowledge. However, if the university environment fails to provide belonging needs to a student, it would be difficult or unlikely for a student to obtain the qualification, knowledge and skills sought after. This implies that deficiency in belonging needs decreases the prospects of student success and self-actualisation.

Strayhorn (2012) highlights the importance of sense of belonging by arguing that the goals of higher education cannot be achieved, realised nor perused until students feel a sense of connectedness, membership and belonging in the learning environment. Lack of belonging or inability to find a fit between the student and the learning environment can lead students to dropout or to transfer to another institution where they feel they belong (Jackson, 2016).

Sense of belonging is a fundamental motive, sufficient to drive human behaviour

All people want to feel cared about, needed, valued and connected to others (Strayhorn, 2012). The need to belong is important to students' daily activities and can compel them to act in a particular manner in order to achieve desired goals or avoid unpleasant situations. Baumeister and Leary (1995) attest to this by proposing that the need to belong stimulates goal-directed activities designed to satisfy that specific need to belong.

Strayhorn (2012) posits that the need to belong is important in educational contexts because it can motivate students to achieve the intended positive outcomes, like completing their qualification. Moreover, the need to belong can also motivate students to join a university choir, campus sporting clubs or Student Representative Council (SRC) organisations.

Strayhorn (2012) asserts that in some cases, the urge to belong can force students to build bonds of support, trust, and also encourage them to establish friendships with members of groups that are marginalised and devalued in the university context. While this is the case, “the need to belong does not always compel students to act in ways that are positive, prosocial or productive” (Strayhorn, 2012, p. 19). The appetite to belong can drive or motivate some university students who seek social acceptance and affiliation to subject themselves to socially undesirable behaviour. For example, a student can join a gangster or rebellious group of students for the purpose of satisfying their need to belong.

Sense of belonging takes on a heightened importance (a) in certain contexts (b) at certain times (c) among certain populations

Strayhorn (2012) points out that sense of belonging is context-specific and person-specific, and that the need to belong does not constantly stay the same. The transition from high school or from work to university can be challenging and threatening for some students, particularly for students who come from disadvantaged backgrounds. Students’ sense of belonging becomes salient in environments or situations of unfamiliarity. Gooednow (1993) and Strayhorn (2012) demonstrated that sense of belonging takes on special prominence at certain times such as during adolescence stage and early adulthood when individuals begin to consider who they are or wish to be, where or with whom they belong and where they invest their time. For example, sense of belonging can be threatened and also take priority in a situation where a new student arrives at university for the first time with no friends. In this case, a student may feel lonely, alienated and strive to make new friendships with people of the same age group, social class or even people of the same race in order to satisfy the feeling of belonging, which is threatened in a new environment. This means that the need to belong directs and guides behaviour at specific times and under certain conditions.

Sense of belonging is related to, and is seemingly a consequence of mattering

Sense of belonging is related to mattering (Strayhorn, 2016). Schlossberg (1985) defines mattering as a feeling, rightly or wrongly, that one matters and is valued or appreciated by others. According to Strayhorn (2012), for an individual to satisfy the need for belonging, they must first believe that someone cares about them. Schlossberg (1985) states that to the extent that people perceive that they do not matter, they will continue to feel marginalised and disconnected or isolated. Mattering to others may serve as a motive, sufficient to guide human behaviour (Rosenberg & McCullough, 1981). For students in learning environments, the feeling of not being valued and appreciated by others may motivate them to leave university to seek for connection and a feeling of mattering in other social contexts. Mattering plays an important role in facilitating a sense of belonging and students' educational success, hence, students should feel that they matter so that they can achieve their academic goal (Strayhorn, 2012, 2016).

Social identities intersect and affect college students' sense of belonging

Strayhorn (2016, p. 44) claims that, "to understand students' belonging experiences, one must pay close attention to issues of identity, identity salience, ascendancy of certain needs and social contexts that exert influence on these considerations". This implies that sense of belonging is context-and-student specific and largely depends on students' backgrounds, general life experiences, individuals' appraisal of the situation and most importantly, their social identities.

Strayhorn (2012) is of the opinion that belonging is universal and applies to all, however, individuals experience belonging in new and different ways. Social identities such as race, ethnicity, gender, class, sexual orientation and religion converge and intersect in ways

that influence an individual's sense of belonging. In the context of the current study, two historically disadvantaged university students may want to satisfy their need to belong to the university environment, however, in doing so, the students may choose different methods of satisfying the need. One student may choose to join a sporting club, whereas the other one may choose to gratify the belonging need by joining the Lesbian, Gay, Bisexual and Transgender (LGBT) student organisations.

Strayhorn (2016) confirms that students' social identities intersect and affect their sense of belonging. This means that in learning environments, social identities play a significant role in determining students' needs for belonging. Thus, there can be no single method for building belonging for students, and what works for one student may not work well or at all for another student (Strayhorn, 2016).

Sense of belonging engenders other positive outcomes

As identified by Maslow (1954), sense of belonging is a basic human need. Research reveals that sense of belonging is a source of positive outcomes, and can lead to a positive wellbeing, achievement, engagement, happiness and optimal functioning (Hausmaan, Schofield, & Woods, 2007; Strayhorn, 2012). In case of university students, sense of belonging is connected to and influences their intention to dropout (Strayhorn, 2016). When students find a niche in the learning environment, they are more likely to further develop a positive attitude towards that particular environment, which may in turn decrease their chances of dropping out of university. To elaborate on this view, Strayhorn (2012) suggests that since sense of belonging is important, then, priority should be on developing educational contexts that foster belonging so that students establish solid bonds with their learning environments, which will in turn compel them to stay committed to their studies.

Sense of belonging must be satisfied on a continual basis and likely changes as circumstances, conditions and contexts change

Belonging needs are generally not stable, and depend largely on the environment that an individual finds him or herself (Strayhorn, 2016). For example, a student may find and satisfy the need to belong in online student tutorial forums and yet, fail to find the belonging need in one-on-one discussion groups or even from the department. This means that social contexts at university can either build one's sense of belonging or disrupt such belonging.

The transition from high school to university can also result in the disruption of students' sense of belonging (Strayhorn, 2016). Disruption in one's sense of belonging can lead to discomforts, negative and adverse consequences (Jackson, 2016). Strayhorn (2016) also adds another essential point that disruptions in students' sense of belonging can engender negative outcomes such as maladjustment, changing of institutions or prone feelings of dropping out of university. Strayhorn (2016, p. 45) goes on to suggest that when sense of belonging is disrupted, students must continuously "engage in activities and intersections that foster belongingness in the hope of regaining a sense of acceptance, mattering and inclusion". Figure 2.3 provides an illustration of the core elements of Strayhorn's theory of belonging.

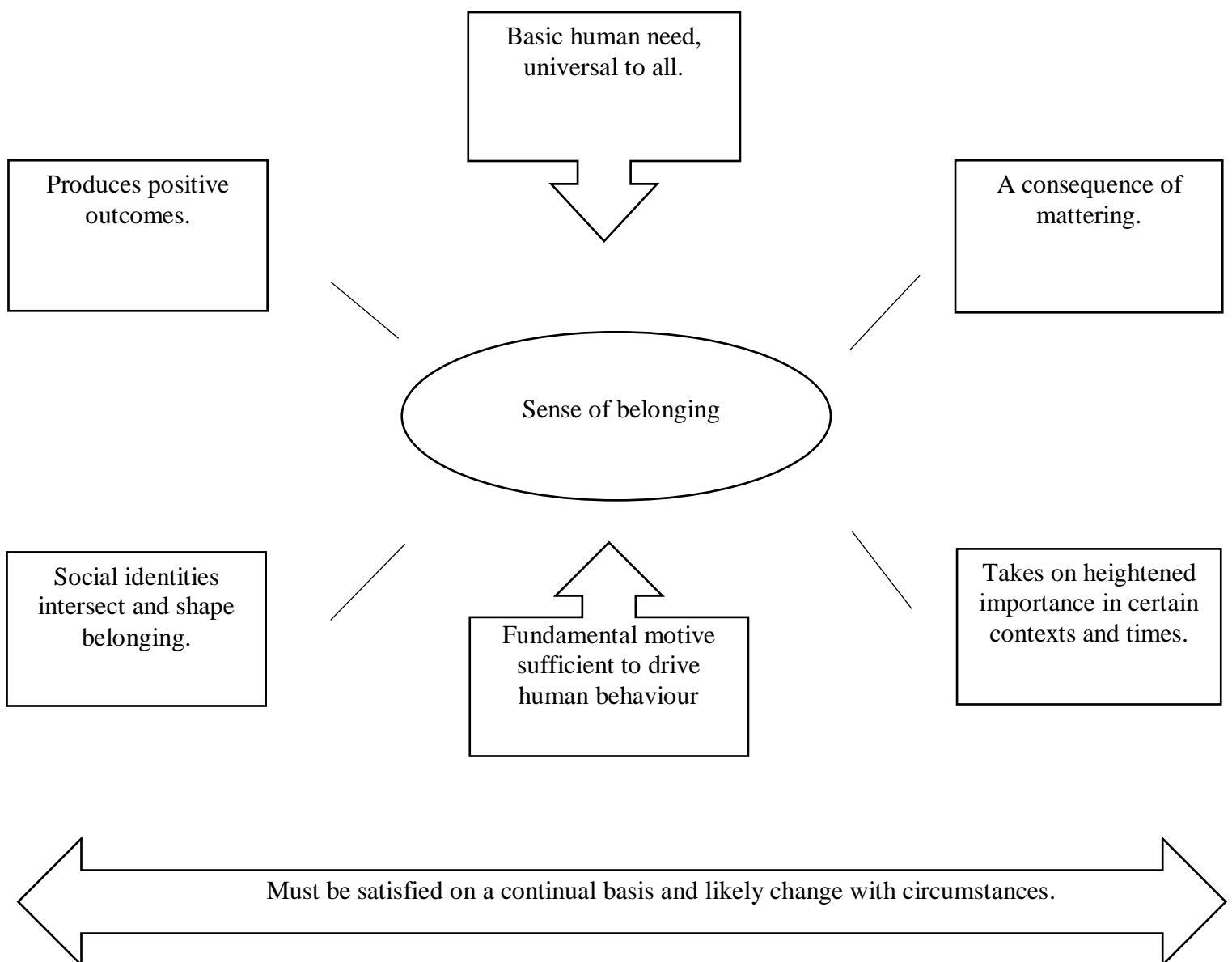


Figure 2.3: Core elements of belonging theory, Reprinted from “Student development theory in higher education: a social psychology approach”, (p. 46), by T. L. Strayhorn, 2016, New York, NY: Routledge. Reprinted with permission.

Strayhorn’s model was considered the most important and appropriate for this study since it was specifically conceptualised for students within higher education contexts. Additionally, the model demonstrates, to a greater degree, how students from different

backgrounds succeed or struggle to find a fit between themselves and their respective educational contexts.

Strayhorn (2012) relied on Tinto's (1975) model to explain some aspects of his model pertaining to students' adjustment to university. However, Strayhorn challenges Tinto's model by positing that Tinto's model does not take into account the educational challenges and circumstances of historically disadvantaged students. This justifies the use of Strayhorn's model in this study since it accommodates challenges of historically disadvantaged students and also promotes an understanding of belonging needs among marginalised groups of students.

In designing his theoretical model, Tinto (1975) demonstrates that students' backgrounds play a role in persistence or dropout decisions, but fails to indicate how these backgrounds engender dropout decisions in relation to the unique circumstances of historically disadvantaged students. Nevertheless, Tinto's model is important to mention in the current study because it highlights the significance of students' adjustment to university and also demonstrates how adjustment contributes to dropout. Thus, Tinto's theory will also be used as a lens to understand students' adjustment processes.

Tinto (1975) utilised the suicide concept of Durkheim (1961) to understand dropout. According to Durkheim (1961), individuals commit suicide when they feel that they are not integrated in the society. Durkheim (1961) is of the view that suicide rises when individuals lack moral integration and collective affiliation to the society. These forms of marginalisation are seen as indicators of insufficient personal interaction with other members of the collective. Tinto (1975) argues that social conditions affecting dropout resemble those resulting in suicide. According to Tinto (1975), lack of congruency between the student and the learning

environment and lack of adjustment to the university may lead to low commitment to university which may ultimately contribute to dropout decisions.

Tinto's model suggests that the process of dropping out of university is longitudinal and involves an interaction between the student, the academic and social systems of the learning environment. Tinto (1975) posits that in order to understand dropout, it is important to take into consideration the fact that students enter into institutions of higher learning with a variety of attributes. These attributes include students' past experience, gender, race, ability and family background. According to Tinto (1975), these attributes influence students' commitment to university. Figure 2.4 shows Tinto's (1975) longitudinal model of institutional departure.

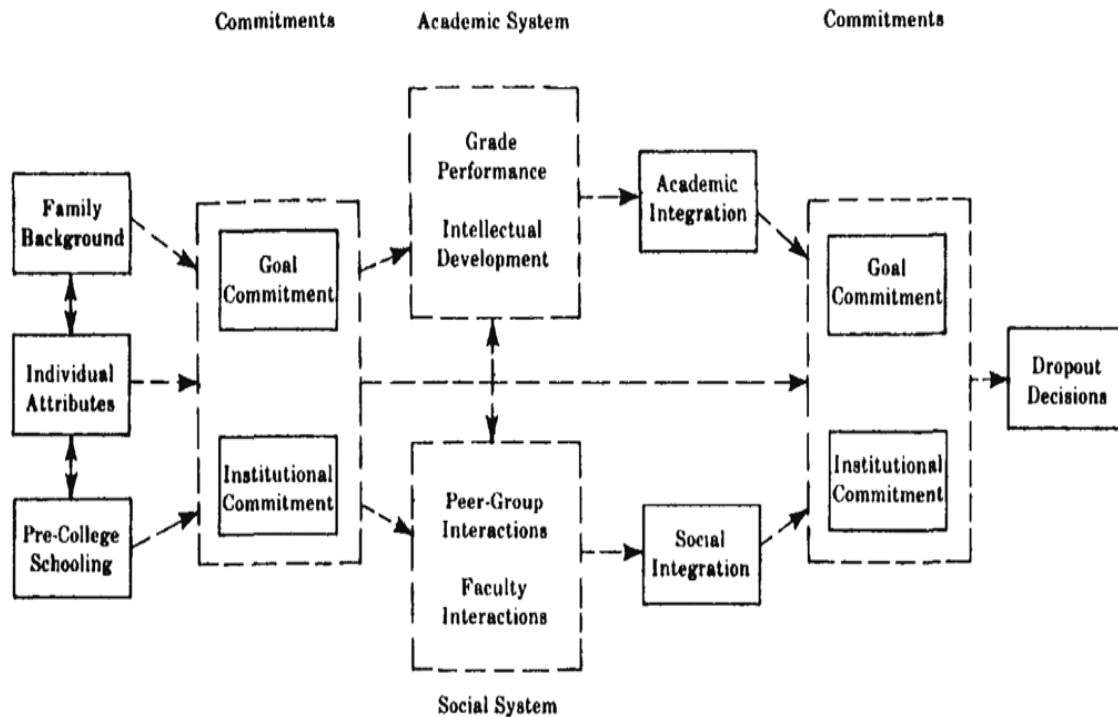


Figure 2.4: Tinto's (1975) model of institutional departure

Conceptual schema for dropout from college. Reprinted from "Dropout from higher education: A theoretical synthesis of recent research", by V. Tinto, 1975, *Review of Educational Research*, 45(1), 89-125. Copyright [1975] by American Educational Research Association. Reprinted with permission.

Tinto (1975) makes a distinction between goal commitment and institutional commitment. Goal commitment is an individual's potential to stay at university in order to complete his or her degree, whereas institutional commitment refers to the extent to which students are attached and satisfied with their university (Davidson, Beck, & Milligan, 2009). Students showing a high level of goal commitment to their university are most likely to persist at university compared to those with low levels of goal commitment. Goal commitment is a reflection of students' multi-dimensional process of interactions between the individual, the family and their experiences (Tinto, 1975). In addition, goal commitment may serve as an indication for students' commitment expectations. For example, a student whose goal is to

attain a degree may encounter adjustment difficulties at university but decide to continue with enrolment in order to obtain a degree with the expectation of getting better employment opportunities.

Institutional commitment is also considered to be important in understanding dropout from the university. Tinto (1975) is of the view that institutional commitment may lead students to stay committed through their programmes; however, insufficient institutional commitment to university may drive students out of the institution. This means that the bond that a student has with the institution is a significant factor which indicates whether the student will complete their studies or not. Thus, students who invest more time in academic activities would be expected to have low intentions to drop out of university than those who invest less time in academic activities. Taking into account commitment factors from Tinto's theoretical model, goal and institutional commitments are, therefore, seen as potential causes for university persistence or dropout.

Tinto (1975) further points out that social and academic adjustment influence students' decisions to persist at university. According to Tinto (1993), the greater the environment allows for adjustment opportunities, the greater the likelihood that students will remain in the institution to a point of completion of their studies. Tinto (1993) adds that positive adjustment raises one's goals and strengthen commitments to the institution. In contrast, the model reveals that the lower the degree of social and academic adjustment into the university community, the greater the likelihood of abandoning studies.

Tinto (1993) argues that withdrawal from university does not always imply lack of commitment, but challenges associated with adjustment to new situations. According to Tinto (1993), absence of adjustment appears to arise from incongruence and isolation, or lack of institutional fit. Tinto (1993) proposes that persistence at university requires students to adjust both socially and academically. Undergraduate students struggle with adjustment during their

transition to university. Tinto (1993) concurs that many students endure brief adjustment periods at university, however, a proportion of others experience lengthy periods of adjustment and eventually decide to abandon their studies. Hence, Tinto (1993) suggests that universities should assist students to successfully deal with the transition from high school to university in order to ensure and allow for positive adjustment.

2.6. Summary of chapter

This chapter has provided the literature review on sense of belonging, adjustment and the intention to dropout, socioeconomic status as a moderator variable as well as the theoretical framework that informed the study were also described and discussed. The next chapter is the research design used and methodology.

CHAPTER III

RESEARCH DESIGN AND METHODOLOGY

3.1. Introduction

In this chapter, the research methodology and techniques used to answer the research questions are discussed. The chapter outlines the purpose, objectives and aims of the study. The chapter also provides a discussion on the research paradigm, ontology, epistemology and axiological assumptions. Furthermore, a discussion on the research approach and the research design used in conducting the study is provided. The chapter also provides a discussion on cross-sectional design, population, sampling and sample size. The research setting and context, as well as data collection procedures are described and discussed. Research instruments used, data analysis procedures as well as ethical considerations underpinning the study are also discussed in this chapter.

3.2. Purpose, objective and aim of the study

The purpose of this study was to investigate the role of adjustment and sense of belonging on students' intention to dropout of university. The objectives of the study were to: establish whether there is a significant relationship between sense of belonging and adjustment and students' intention to dropout of university; determine whether sense of belonging and adjustment could predict the intention of the students to dropout of university; and test whether students' socioeconomic status could moderate the relationship between sense of belonging and intention to dropout of university. The aim of the study was to test the research questions provided below:

R₁: Is there a significant relationship between sense of belonging, adjustment and students' intention to drop out of university?

R₂: Do sense of belonging and adjustment predict students' intention to drop out of university? and

R₃: Does the socioeconomic status of students moderate the relationship between sense of belonging and intention to drop out of university?

3.3. Research paradigm

A paradigm refers to a “pattern, structure and framework or system of scientific and academic ideas, values and assumptions” (Olsen, Lodwick, & Dunlop, 1992, p. 16).

According to Kuhn (1977), a paradigm symbolises a research culture with a set of beliefs, values and assumptions that a community of researchers has in common regarding the nature and conduct of research. This means that a paradigm is a broader and singular representation of worldviews held by a group of researchers who subscribe to a particular form and method of conducting research.

Different studies are housed within different research paradigms and worldviews. The current study, however, is housed within the post-positivist paradigm. Post-positivist paradigm holds the assumption that there is a reality independent of human thinking that can be studied through scientific methods (Wagner, Kawulich, & Garner, 2012). The paradigm also acknowledges that human research involves some degree of the error component and that reality cannot be absolutely accurate (Whilhem, 2016). In addition, post-positivism accepts that researchers “cannot observe the world they are a part of as totally objective and disinterested outsiders”, however, post-positivist researchers do believe in the possibility of objective reality (Muijs, 2004, p. 5). According to Muijs (2004), post-positivist paradigm encourages the fact that researchers should try and approximate reality as best as they can,

while simultaneously realising that their subjectivity is shaping that reality. This implies that post-positivism is in contradiction with the notion of the absolute truth of knowledge (Phillips & Burbules, 2000).

Denzin and Lincoln (2011) highlight that post-positivism paradigm uses multiple methods for capturing as much of reality as possible and that this paradigm places emphasis on the discovery and verification of theories. Post-positivism rests upon the assumption that objectivity is an essential aspect of an enquiry and that researchers must examine their methods and conclusions for bias (Phillips & Burbules, 2000). According to the post-positivism paradigm, data, evidence and rational considerations shape knowledge (Creswell, 2014). Furthermore, Phillips and Burbules (2000) indicate that in the post-positivism worldview, absolute truth can never be realised and research is always imperfect. This means that researchers cannot be absolutely positive about claims of knowledge when studying actions and behaviours of human participants since human beings are prone to making errors (i.e. omission or lack of understanding the questionnaire) (Creswell, 2002, 2014; Phillips & Burbules, 2000; Whilhem, 2016).

In conducting this study, the researcher acknowledged the possibility of the error component since the study was conducted with human participants. Hence, the present study is housed within a post-positivist paradigm. According to Lincoln and Guba (1985), a paradigm consists of four elements, namely, ontology, epistemology, axiology and methodology. The four paradigmatic elements are discussed in detail below.

3.3.1. Ontology

The concept of ontology is concerned with the nature of existence and structure of reality and what is possible to know about the world (Crotty, 1998). According to Antiwi and Hamza (2015), ontology specifies the form and nature of reality and what can be known about that reality. Ontology is concerned with “a question of whether or not there is a social reality that exists independent from human conceptions and considerations and, whether there is a shared reality, multiple or context-specific realities” (Ormston, Spencer, Bernard, & Snape, 2014, p. 4).

This study was guided by the ontological values of post-positivism paradigm, which considers objectivity to be an essential part in generating knowledge (Grover, 2015). According to this paradigm, researchers must be objective throughout the process of research in order to generate findings that are bias free (Whilhem, 2016). In addition, the post-positivist paradigm bases knowledge on measurements and numbers. This implies that numerical data, evidence and rational considerations shape knowledge (Grover, 2015). Hence, the investigation on the effect of sense of belonging and adjustment on the intention to dropout was conducted through the use of numerical data, the application of statistical methods and validated measurements.

3.3.2. Epistemology

Epistemology is considered by Whilhem (2016) as a criterion used by researchers to establish knowledge about the world. Cohen, Manion and Morrison (2007) posit that epistemology is about the assumptions that researchers make about knowledge, its nature and form, how it can be acquired and how it can be communicated to others. In addition, Hirschheim, Klein and Lyytinen (1995) argue that epistemology refers to the nature of the relationship between the researcher and the nature of human knowledge and understanding that can be acquired through different methods of investigation.

According to Al-saadi (2014), there are a range of epistemological positions, and researchers need to adopt their own epistemological positions. In the current study, the researcher was guided by the post-positivist worldview. Post-positivists are of the assumption that the use of scientific methods is the only way to establish knowledge and objective reality. However, the knowledge produced can never be totally objective or absolutely certain due to the possibility of errors committed either by researchers or human participants during the research process (Crotty, 1998; Grover, 2015; Whilhem, 2016). Post-positivist epistemology was considered suitable for this study because it enabled the researcher to investigate participants in a detached, bias free manner and objectively through the use of validated measurements and statistical techniques.

3.3.3. Axiological assumption

An axiological assumption relates to the science of value and ethics adopted to guide the study (Justus & Nangombe, 2016). According to Kivunja and Kuyini (2017), axiology refers to ethical issues that need to be considered when planning a research study. In addition, Finnis (1980) indicates that an axiological assumption involves defining, evaluating and understanding concepts of right and wrong behaviour relating to the research. In this study, the axiological assumption relates the rigour followed using the post-positivist-centred approach to conduct the study. The researcher sought consent from participants, and prior seeking consent, the researcher explained the purpose of the study to the participants. In conducting the study, the researcher applied the ethical principles and guidelines from the American Psychological Association (APA) (American Psychological Association, 2003).

3.4. Research approach

A research approach is a plan and procedure which comprises the steps of broad assumptions, with detailed methods of data collection, analysis and interpretation (Chetty,

2016). There are three broad research approaches as follows: quantitative, qualitative and mixed methods (Creswell, 2014). According to Chetty (2016), the choice of a research approach is based on the nature of the research problem being addressed, or the hypothesis being tested. A quantitative research approach was used in conducting this study and is described in the next section.

3.4.1. Quantitative research approach

A quantitative research approach was used to investigate the effect of adjustment and sense of belonging on students' intention to dropout. A quantitative research approach involves a systematic manner of investigating a phenomena using validated measures, it is used to answer questions in order to explain, predict or control a phenomena (Leedy, 1993). According to Leedy (1993), a quantitative research approach is used to explain a phenomena by collecting numerical data analysed using statistically-based methods. Moreover, Aliaga and Gunderson (2002) posit that quantitative research encompasses the collection of data so that information can be quantified and subjected to statistical treatment in order to support or refute alternative knowledge claims. This implies that a quantitative research approach uses statistics to generate meaning, test hypotheses and develop an understanding of a phenomena.

Quantitative research allows the researcher to project their findings onto the larger population through an objective process (Borrego, Douglas, & Emelink, 2009). Williams (2011) posits that quantitative research starts with a statement of a problem, generating of hypotheses or a research question, reviewing related literature and analysing data numerically. In quantitative research, the hypotheses being tested and the phrasing of the research questions govern how data will be collected as well as the method of statistical analysis used to examine the data (Creswell, 2002). In addition, in quantitative research, the results are interpreted in order to establish the likelihood that the conclusions found among the sample can be replicated

with a larger population (Borrego et al., 2009). Validated measurements and statistical tools were used to answer the research questions of the study and to test the hypotheses.

3.5. Research design

Bless, Higson-Smith and Kagee (2006) define research design as procedures carried out in research in order to test a hypothesis. In addition, Zikmund (1988) considers research design as a plan specifying the methods and procedures for collecting and analysing data. According to Akhtar (2016), a research design lays out a framework or blueprint for data collection, measurement and analysis of data. Mouton (1996) is of the view that the main role of a research design is to enable the researcher to maximise the validity of research results.

The current study intended to test the relationship between sense of belonging, adjustment and the intention to dropout. Hence, a correlational research design was used in the study. The main purpose of correlational research is to determine the relationship between variables and to determine a regression equation that could be used to make predictions to a population (Simon, 2011). According to Creswell (2012), a correlational design involves making use of correlational statistics to describe and measure the degree or association of two or more variables. Furthermore, Leedy and Ormrod (2010, p. 183) also postulate that correlational research serves to investigate “the extent to which differences in one variable are related to differences in one or more other variables”.

Researchers use correlational research for various reasons. Firstly, correlational research is used to establish a statistical relationship or association between variables. Secondly, correlational research is used to establish the reliability and validity of a measurement (Prince, Jhangiani, Chiang, Leighton, & Cuttler, 2017). Thirdly, a correlational research design may be used to confirm a theory or test a hypothesis (Prince et al., 2017). Lastly, a correlational research design may also be used to measure the effect of one variable onto the other. The current study sought to investigate the effect of sense of belonging,

adjustment and the intention to dropout. In addition, the study further sought to test the hypothesis that there is a relationship between sense of belonging, adjustment and the intention to dropout. Thus, correlational research design was considered the most appropriate method to test the proposed hypothesis.

3.5.1. Cross-sectional survey

A cross-sectional survey was used to collect data from respondents. A cross-sectional survey is a method of collecting data from the population of interest at one point in time (Lavrakas, 2008). The current study sought to investigate the experience of university students at a particular point in time and measuring variables on a single occasion. Hence, a cross-sectional survey was used. Contrary to a longitudinal design, which involves collecting data at different stages, a cross-sectional survey does not require the researcher to conduct follow-ups with participants at varying occasions (Whitley, 2002). This method is beneficial in that it is not associated with challenges such as participant attrition, economic and time costs (Lavrakas, 2008; Nharirire, 2018; Whitley, 2002).

3.5.2. Population and sampling

3.5.2.1. Population

Bless and Higson-Smith (2000) define population as a set of elements that the research focuses on and to which the findings obtained should be generalised. It is the entire set of individuals of interest to the researcher from which a sample is withdrawn (Gravetter & Forzano, 2016). Therefore, the targeted population for this study included undergraduate students at a university in South Africa since the study focused on the experiences of students within a university setting that contributed to their decisions to abandon their studies.

3.5.2.2. Sampling

Sampling involves the process of drawing few participants from a larger group in order to predict or make an inference about the population (Atinde, 2014). In the case of the current study, this meant recruiting students enrolled for undergraduate programmes at a university who had particular knowledge of the phenomenon under study. Moreover, in recruiting participants for this study, the researcher used sampling techniques that made it possible to recruit suitable participants. A researcher can use either probability or non-probability sampling techniques, which results in a sample (Gravetter & Forzano, 2016). In probability sampling, every element of the population of interest has an equal chance of being included in the sample, whereas not all elements of the population have an equal chance of being a part of the sample in non-probability sampling (Whitley, 2002).

A non-probability method (convenience sampling) was used to select participants for this study. With convenience sampling, participants are selected on the basis of accessibility and willingness to take part in the study (Etikan, Musa, & Alkassim, 2016). A convenient sampling method was considered to be appropriate for this study because the researcher distributed the questionnaire through email to all undergraduate students listed in the database, and, therefore, participation in the study depended on students' willingness and availability to take part in the survey.

A participant was considered an individual who met the following criteria in this study:

- i. Registered for an undergraduate programme at the University of South Africa (UNISA); and
- ii. Aged 18 years and above.

Exclusion criteria:

- i. Not registered for an undergraduate programme at UNISA; and

- ii. A minor.

3.5.3. Sampling size

According to Cohen et al. (2007), the size of the sample is determined by the research approach that the researcher uses to conduct the study. A quantitative research approach requires a relatively larger sample size in order to obtain the statistical significance (Creswell & Wisdom, 2013). A sample of 955 participants were able to complete the survey from a total population of 76 742 to whom the survey was sent.

3.5.4. Research setting and context

Data was collected from undergraduate students studying at the University of South Africa (UNISA). UNISA is the largest university in South Africa in terms of student enrolment and offers vocational and academic programmes. The university offers undergraduate qualifications that are within the faculty of law, education, human sciences, accounting sciences, economic and management sciences, agriculture and management sciences, science engineering and technology (University of South Africa, 2019).

3.5.5. Data collection

All UNISA students are allocated an e-mail address upon registration. Hence, the undergraduate students who participated in the study were recruited through their student email addresses. The e-mail addresses of students were obtained from the Registrar's office after obtaining permission to conduct the study from the UNISA Research Permission Sub-committee of the Senate Research, Innovation, Postgraduate Degrees and Commercialisation Committee (Ref: 2018_RPSC_036_RS).

SurveyMonkey (an online survey tool) was used to collect data. Emails were sent to undergraduate students inviting them to participate in the study. Students were requested to

complete the survey from 14th December 2018 to 17th February 2019. The link to the survey contained the information sheet, consent form, study questionnaire and a demographic questionnaire.

The first section of the questionnaire solicited information from respondents about their university experiences in terms of the intentions to dropout or discontinue studies. The second section focused on respondents' sense of belonging towards their university environment. The third section focused on students' adjustment to university while the final section solicited information on the demographic characteristics of students such as age, gender, population group and socioeconomic status (Appendix I). In addition, the demographic questionnaire required students to indicate their parents' level of education, their faculty or college and their year of studies.

3.6. Research instruments

3.6.1. Psychological Sense of School Membership (PSSM)

The Psychological Sense of School Membership (PSSM) scale developed by Gooednow (1993) was used to measure students' sense of belonging in the current study (Appendix G). PSSM was initially developed to measure sense of belonging in middle and junior high school, however, over the years, researchers have modified the scale to measure university students' sense of belonging (Zumbrunn, McKim, Buhs, & Hawley, 2014). PSSM has a good value as a screening tool to identifying students at risk of academic failure at university level (Alkan, 2016; Ye & Wallace, 2014; Zumbrunn et al., 2014).

PSSM is an eighteen item Likert-type scale with all question items written in a 5-point Likert format ranging from not at all true (1) to completely true (5). The original scale developed by Gooednow (1993) contains question items such as "I wish I were in a different school". However, since the current study sought to measure sense of belonging at university, the wording of some items used was adapted to fit the university context. For example, instead

of using the item “I wish I were in a different school”, the researcher used the following statement: “I wish I were in a different university”. This enabled the researcher to measure sense of belonging at university level (Freeman, Andrman, & Jensen, 2007; Pittman & Richmond, 2008).

The PSSM scale has been found to have good psychometric properties with Cronbach’s Alpha ranging between 0.803 and 0.875 across studies (Gooednow, 1993). In addition, the PSSM scale was also adapted for use in Spanish and was found to have a Cronbach’s Alpha of 0.771 (Gooednow, 1993). A reliability coefficient was calculated for PSSM in the current study, however, prior testing for reliability of the measure, negatively stated items, 12, 14, 16 and 18 were reverse coded. The measure consisted of 10 items on a 5-point Likert scale. The 10 items for the newly adapted scale was found to be reliable ($\alpha = 0.848$). This reliability coefficient is almost comparable to that of the original PSSM scale (Gooednow, 1993).

3.6.2. College Persistence Questionnaire (CPQ)

In the current study, the intention of the students to drop out of university was measured by the College Persistence Questionnaire (CPQ), developed by Davidson et al. (2009) (Appendix F). CPQ is a fifty-three-item questionnaire comprising six factors. These factors include Institutional Commitment, Degree Commitment, Academic Integration, Social Integration, Support Services Satisfaction and Academic Conscientiousness. According to Davidson et al. (2009), CPQ may be used to identify students at risk of dropping out, discover why an individual student is likely to abandon his or her education, and determine variables that best distinguish undergraduates who will persist from those who will not persist at their institutions (Davidson et al., 2009).

In developing CPQ, Davidson et al. (2009) conducted a pilot study on an exploratory investigation of the instrument on 2 022 and 283 university students respectively in order to create an item pool, carry out factor analysis of responses, identify cluster items and assess the ability of CPQ to predict dropout. The pilot investigation resulted in a measure consisting of several variables that have been found to be related to dropout (Davidson et al., 2009). These variables consist of Institutional Commitment, Degree Commitment, Academic Integration, Social Integration, Support Services Satisfaction and Academic Conscientiousness. The focus of the current study was on the intention to dropout, thus only two variables from CPQ were used to measure such intention, namely; Institutional commitment and degree commitment. According to Davidson et al. (2009), institutional commitment reflects a student's intentions to re-enrol and to earn a degree from a particular institution, confidence in having selected the right institution and thoughts of continuing with enrolment or dropping out, whereas degree commitment reflects a student's intention to finish a qualification and estimates of likelihood that the qualification will be achieved. Institutional commitment and degree commitment, therefore, both reflect students' thoughts of completing a qualification or dropping out before completion. Thus, in the current study, these two forms of commitment were combined to measure one factor, the intention to dropout.

In CPQ, the institutional commitment subscale contains four items whereas the degree commitment subscale contains five items. CPQ is a 6-point Likert scale with a sixth option 'not applicable'. In the current study, CPQ was converted to a 5-point Likert scale and all the 'not applicable' options discarded in order to compute the mean scores (Davidson et al., 2009). CPQ consists of a 5-point Likert scale with options ranging from favourable to unfavourable, depending on the phrase of the question. For example, the following item: "How much thought have you given to stopping your education at UNISA", would have "Very little thought" to "A lot of thought" as end pegs. CPQ has been found to have Cronbach's Alpha

coefficients ranging between 0.63 and 0.82 and across subscales (Davidson et al., 2009).

Reliability coefficients for the subscales were calculated in this study and institutional commitment was $\alpha = 0.559$ whereas degree commitment was $\alpha = 0.552$. Combined together, the scales were found to have a Cronbach alpha of 0.669.

3.6.3. Student Adaptation to College Questionnaire (SACQ)

The Student Adaptation to College Questionnaire (SACQ) developed by Baker & Siryk (1999) was used to measure adjustment (Appendix H). This measure is useful as a diagnostic tool for identifying students experiencing difficulty adjusting to university and as an assessment tool in research (Petersen et al., 2009). SACQ is a sixty-seven-item measure incorporating subscales relating to academic adjustment, social adjustment, personal-emotional adjustment and attachment to the institution (Mohamed, 2012). According to Mohamed (2012), the measure is widely used in the United States to measure adjustment at institutions of higher learning and also to suggest a focus for interventions. SACQ is a 9-point Likert scale with options ranging from 1 (*doesn't apply to me at all*) to 9 (*apply very closely to me*). In the current study, SACQ was adapted to a 5-point Likert scale with options ranging from 1 (*Strongly disagree*) to 5 (*Strongly agree*). A Likert scale with over five answer options is considered to yield data of low quality (Revilla, Saris, & Krosnick, 2014), hence, the researcher adapted SACQ to enhance the quality of the data.

SACQ has been used in the South African context to investigate students' level of adjustment to university and has been found to have alpha coefficients for all the subscales ranging from 0.81 to 0.90 for the academic adjustment, from 0.81 to 0.91 for the social adjustment, from 0.77 to 0.86 for the personal-emotional adjustment and from 0.85 to 0.81 for the institutional adjustment (Petersen et al., 2009; Sommer, 2013). Reliability was tested for

all the sub-scales of adjustment in the current study after reverse coding some items, and the reliability coefficients were 0.863 for academic adjustment, 0.805 for social adjustment, 0.865 for personal emotional adjustment and 0.830 for institutional adjustment. In this study, all the adjustment subscales were combined to measure student's adjustment to university. The reliability coefficient for the scales combined was found to be 0.810.

3.7. Descriptive statistics

Descriptive statistics refers to a “set of quantities used to summarise aspects of numerical data” (Kruger & Janeke, 2011, p. 11). According to Brace, Kemp and Snelgar (2009), descriptive statistics indicate important aspects of a data set in a way that helps researchers understand their findings. In addition, Rowley (2016) indicates that descriptive statistics include a number of participants, mean, minimum, maximum, standard error of the mean and the standard deviation. Table 3.1 shows the descriptive statistics of the scales used in this study.

Table 3.1: Descriptive statistics of all variables considered in the study

Scale	N	Min.	Max.	M	SE	SD
Intention to dropout	955	2	5	4.33	.018	.563
Sense of belonging	955	1	5	3.13	.027	.847
Adjustment	955	2	5	3.51	.018	.574

3.8. Reliability and validity

Reliability refers to the consistency of a measurement over time, whereas validity refers to the extent to which scores from a measurement represent the variables they are intended to measure (Prince et al., 2017). A measurement can be considered reliable when it is used by

different researchers under the same conditions and it produces consistent or steady results. In addition, a measurement can be considered valid when it measures an attribute that exists and variations in the attribute produce variations in the outcome of the measurement procedure (Borsboom, Mellenbergh, & Van Heerde, 2004). According to Field (2009), validity is a necessary but not a sufficient condition of a measure since an instrument must first be reliable in order to be valid. Reliability of the scales used in the study was determined by measuring the internal consistency thereof. The results revealed Cronbach's Alpha scores for the subscales and the overall reliability coefficient for the combined subscales (See Table 3.2).

Table 3.2: Reliability of instruments used in the study

Scale	Subscale	α
SACQ	Personal-emotional adjustment	0.865
	Academic adjustment	0.863
	Social adjustment	0.805
	Institutional attachment	0.830
	SACQ reliability (overall)	0.810
CPQ subscales	Institutional commitment	0.559
	Degree commitment	0.552
	CPQ reliability (overall)	0.669
PSSM scale		0.848
PSSM reliability (overall)		0.848

3.9. Data analysis

Reliability analysis, descriptive statistics, Pearson correlation analysis, multiple linear regression analysis and moderator analysis were considered in the study and the Statistical Package for the Social Sciences version 25 (SPSS 25) and AMOS 25 were used to analyse data.

Table 3.3 shows the statistical procedures applied to test the hypotheses stated in the study.

Table 3.3: Data analysis procedures

Test statistics	Hypothesis
Correlation	There will be a significant relationship between sense of belonging, adjustment and students' intention to drop out of university.
Multiple linear Regression	Sense of belonging and adjustment significantly predict students' intention to drop out of university.
Moderation analysis	Students' socioeconomic status will significantly moderate the relationship between sense of belonging and intention to dropout.

3.10. Ethical considerations

Upholding ethical conduct is essential in psychological research (Setshedi, 2018). The current study was guided by the ethical principles of the American Psychological Association (APA) (American Psychological Association, 2003). APA consists of five general principles as follows: beneficence and maleficence (safeguarding the welfare and the rights of research participants and to conduct research with the intention to do good); fidelity and responsibility (upholding professional conduct, clarifying researchers' professional role and accepting responsibility); integrity (promoting accuracy, honesty and truthfulness when conducting

research); justice (promoting fairness in the conduct and treatment of research participants); and respect for people's rights and justice (respecting the dignity and worth of research participants, rights to privacy and confidentiality).

Prior to conducting the study, the researcher sought permission from the research ethics committees of the institution selected for the study. Permission to conduct the study was requested and granted by the Department of Psychology Ethics Committee, UNISA (Appendix C), the College of Human Sciences Ethics Review Committee (Appendix D), and the Research Permission Sub-committee (RPSC) of the Senate, Research, Innovation, Post-graduate Degrees and Commercialisation Committee (SRIPCC) (Ref: RPSC_036_RS) (Appendix E).

In conducting the current study, the following ethical issues were considered: An information letter (Appendix A) and an informed consent form (Appendix B) were provided to respondents; participation was voluntary; anonymity was assured; confidentiality ensured; and respondents assured of protection from harm. Prior to participating in the survey, participants were informed in writing about the aim and objectives of the study and procedures involved in conducting the study. Respondents were also informed that they could withdraw or decline to participate in the survey (i.e. voluntary participation was communicated and guaranteed to respondents). Students were further informed that their identity will not be disclosed in any of the research material, research report and publications. Additionally, respondents were informed that all information provided will be kept confidential and that the results will be reported in aggregate forms. Respondents were also informed that they could contact the researcher in case they needed any form of psychological assistance or counselling services as a result of participating in the survey, and that the researcher would facilitate a referral for the respondent to the UNISA Health and Wellness Centre. The researcher adhered to all the ethical issues mentioned above and also included contact details in the information letter in case respondents had further queries about the study.

3.11. Summary of chapter

This chapter has provided a discussion on the purpose, objectives and aims of the study. The research paradigm, the ontology, epistemology as well as axiological assumptions were described and discussed. The research approach and design used in the study were described. Furthermore, the cross-sectional survey, population, sampling and sampling size were discussed. The chapter has also provided a discussion on the research setting and context, data collection procedures, research instruments used, data analysis and ethical considerations as applicable in the study. The next chapter presents the results of the study.

CHAPTER IV

RESULTS

4.1. Introduction

This chapter focuses on the presentation of the results. The hypotheses are stated and the demographic characteristics of respondents presented. The results are presented using Pearson correlation, multiple linear regression and moderation results.

The main purpose of this study was to examine the relationship between sense of belonging, adjustment and students' intention to drop out of university. In particular, the study sought to determine whether or not there is a relationship between sense of belonging, adjustment and student's intention to drop out of university. The study also sought to test whether sense of belonging and adjustment would predict students' intention to dropout of university, and to test whether the relationship between sense of belonging and intention to dropout of university could be moderated by the socioeconomic status of students. To answer the research questions, questionnaires were sent to UNISA students registered for undergraduate programmes in 2018. The following hypotheses were tested in the study:

4.2. Hypotheses

The following hypotheses were formulated based on the research questions:

Hypothesis 1: There will be a significant relationship between sense of belonging, adjustment and students' intention to drop out of university.

Hypothesis 2: Sense of belonging and adjustment will significantly predict students' intention to drop out of university.

Hypothesis 3: Students' socioeconomic status will significantly moderate the relationship between sense of belonging and intention to dropout.

4.3. Population

The population for the study consisted of undergraduate students at the University of South Africa (UNISA). The inclusion criterion required students to be at least 18 years of age and be registered for an undergraduate qualification in 2018. A total of 76 742 emails with a link to the survey questionnaire were sent to students. A total of 1 384 began the survey questionnaire, 429 were partially completed and removed for incompleteness prior the analysis. A total of $n = 955$ completed responses were considered for analysis.

4.4. Demographic characteristics of respondents

This section provides the demographic characteristics of respondents such as gender, age, race, socioeconomic status, parents' level of education, faculty (college) and year of studies.

The demographic information of respondents is presented in Table 4.1. Out of the $n = 955$ completed and returned questionnaires, ($n = 268$, 28.1 %) were males, ($n = 685$, 71.7 %) were females while ($n = 2$, 0.2 %) identified themselves as 'other'. In terms of race, ($n = 630$, 66.0 %) of respondents were black, ($n = 201$, 21.0 %) were white, ($n = 48$, 5.0 %) were Indian, ($n = 53$, 5.5 %) were Coloured, while ($n = 23$, 2.4 %) identified themselves as 'other'. In the current study, White respondents are referred to as historically advantaged students while Black, Indian and Coloured respondents are referred to as historically disadvantaged students. Therefore, the study comprised ($n = 201$, 21.10%) historically advantaged students and ($n = 731$, 76.5 %) historically disadvantaged students.

The socioeconomic status of respondents was categorised into three. Majority of respondents ($n = 624$, 65.3 %) indicated they were from a 'middle socioeconomic status',

followed by (n = 308, 32.3 %) from a 'low socioeconomic status' and (n= 23, 2.4 %) participants indicating that they are from a 'high socioeconomic status'.

With regard to the level of education of parents, majority of respondents (n = 465, 48.7 %) indicated that neither of their parents had more than a high school diploma or degree while (n = 219, 22.9 %) indicated that at least one parent had some education after high school. As shown in Table 4.1, (n = 178, 18.6 %) of respondents indicated that at least one parent had a Bachelor's degree or higher, while (n = 93, 9.7 %) indicated that both their parents had a Bachelor's degree or higher.

Majority of respondents (n = 292, 30.6 %) were registered in the College of Education, (n = 244, 25.5 %) in the College of Human Sciences and (n = 149, 15.6 %) in the College of Law. According to the results, (n = 106, 11.1 %) of respondents were registered in the College of Economic and Management Sciences, (n = 66, 6.9 %) in the College of Science, Engineering and Technology, (n = 67, 7.0 %) in the College of Accounting Sciences and (n = 31, 3.2 %) registered in the College of Agricultural and Environmental Sciences. Majority of respondents (n = 276, 28.9 %) indicated they were their 3rd year of studies while (n = 263, 27.5 %) were in their 2nd year of studies. The results also indicate that (n = 209, 21.9 %) of respondents were in their 1st year of studies while (n = 207, 21.7 %) were in their 4th year.

Table 4.1: Demographic characteristics of respondents

Demographic variable	Group	n (% sample)
Gender	Male	268 (28.1 %)
	Female	685 (71.7 %)
	Other	2 (0.2 %)
Race	Black	630 (66.0 %)
	Coloured	53 (5.5 %)
	Indian	48 (4.8 %)
	White	201 (21.0 %)
	Other	23 (2.4%)
Socioeconomic status of family	Low socioeconomic status	308 (32.3 %)
	Middle economic status	624 (65.3 %)
	High economic status	23 (2.4 %)
Parents/guardian's level of education	Both parents hold a Bachelor's degree or higher	93 (9.7 %)
	At least one parent holds a Bachelor's degree or higher	178 (18.6 %)
	At least one parent has some education after high school or university	219 (22.9 %)
	Neither parent has more than a high school diploma or degree	465 (48.7 %)
College/Faculty	Agricultural and Environmental Sciences	31 (3.2 %)
	Accounting Sciences	67 (7.0 %)
	Economic and Management Sciences	106 (11.1 %)
	Education	292 (30.6 %)
	Law	149 (15.6 %)
	Human Sciences	244 (25.5 %)
	Science, Engineering and Technology	66 (6.9 %)
Year of study	1 st year undergraduate	209 (21.9 %)
	2 nd year undergraduate	263 (27.5 %)
	3 rd year undergraduate	276 (28.9 %)
	4 th year undergraduate	207 (21.7 %)

4.5. Hypothesis testing

4.5.1. Results of Pearson correlation analysis

The first research question sought to test whether there is a significant relationship between sense of belonging, adjustment and students' intention to dropout of university. Pearson correlation analysis was used to test the relationship between sense of belonging, adjustment and intention to dropout. Sense of belonging was found to have a statistically significant relationship with the intention to dropout, $r = .474$ ($p < 0.001$). Adjustment was found to have a statistically significant relationship with the intention to dropout, $r = .576$ ($p < 0.001$) while sense of belonging and adjustment were found to have a statistically significant relationship, $r = .703$ ($p < 0.001$). The results confirmed the hypothesised relationship formulated from research question 1 that there will be a significant relationship between sense of belonging, adjustment and intention to dropout. Table 4.2 shows the means, standard deviations and correlations between sense of belonging, adjustment and students' intention to dropout of university.

Table 4.2: Correlation analysis

Variables	<i>M</i>	<i>SD</i>	1	2	3
1 Intention to dropout	4.33	.563	-		
2 Sense of belonging	3.13	.846	.474**	-	
3 Adjustment	3.51	.575	.576**	.703**	-

Note. † < .10; * $p < .05$; ** $p < .01$; *** $p < .001$

4.5.2. Results of multiple linear regression analysis

The second research question of the study tested whether sense of belonging and adjustment would predict students' intention to dropout of university. Multiple linear regression was used to test whether sense of belonging and adjustment can predict intention to dropout of university. Intention to dropout of university was regressed on to sense of belonging and adjustment to university. The regression model was significant, $F(2,929) = 231.397, p < .001$ and explained 33.3% of the variance in intention to dropout. The standardised regression coefficients for the significant predictors were as follows: sense of belonging ($\beta = 0.140, t = 3.724, p < .001$); and adjustment to university ($\beta = 0.470, t = 12.507, p < .001$). Therefore, the second hypothesis was confirmed. A summary of the multiple linear regression statistics for variables predicting intention to dropout are presented in Table 4.3.

Table 4.3: Summary of multiple regression for variables predicting students' intention to dropout

	R^2	B	SE	β	t	Sig
Model	35.5%	2.457	0.93		26.515	.000
Sense of belonging		.092	.025	.140	3.724	.000
Adjustment to university		.452	.036	.470	12.507	.000

4.5.3. Result of moderation analysis

The third hypothesis stated that students' socioeconomic status would moderate the relationship between sense of belonging and intention to dropout. Moderation analysis was performed to test whether students' socioeconomic status will moderate the relationship between sense of belonging and the intention to dropout. Moderation analysis was tested using the software *Process* (Hayes & Preacher, 2014). Intention to dropout was entered as an outcome variable, sense of belonging as the independent variable, socioeconomic status as the moderator variable, and gender, race and parents' level of education as covariates. The results revealed that the model testing whether socioeconomic status will moderate the relationship between sense of belonging and intention to dropout was significant, $R^2 = 15.6\%$, $F(6.947) = 21.303$, $p < .001$ (see Table 4.4).

Table 4.4: Regression Coefficients for effects on sense of belonging

	<i>B</i>	<i>SE</i>	<i>t</i>	<i>p</i>
Constant	4.887	.1017	48.056	.000
Socioeconomic status	.1322	.0380	3.481	.001
Sense of belonging	.1117	.0107	10.412	.001
Sense of belonging x socioeconomic status	-.0188	.0090	-2.090	.37
Parents' level of education	-.0019	.0178	-.1090	.913
Gender	.0644	.0365	1.767	.077
Race	-.3329	.0340	-9.780	.001
Conditional effects of socioeconomic status at different levels of sense of belonging				
Socioeconomic status	<i>B</i>	<i>SE</i>	95% CI	
At 1 <i>SD</i> below the mean	.1213	.0121	[.0975, .1450]	
At mean	.1117	.0107	[.0906, .1327]	
At 1 <i>SD</i> above the mean	.1021	.0112	[.0801, .1241]	

The model revealed that 15.6% of the variance in the intention to dropout of university can be explained by the variance in sense of belonging, the interaction between sense of belonging and socioeconomic status after controlling for gender and race. The results showed that the interaction between sense of belonging and socioeconomic status (belonging x socioeconomic status) could not moderate the relationship between sense of belonging and the intention to dropout ($\beta = -0.0188$, $t = -2.090$; $p = 0.37$). Therefore, the hypothesis that socioeconomic status will significantly moderate the relationship between sense of belonging and the intention to dropout was not supported by the results (See Table 4.4).

4.6. Summary of chapter

This chapter focused on the presentation of results. The demographic characteristics of respondents, results of Pearson correlation, multiple linear regression, as well as the moderation were presented and discussed. The next chapter focuses on the discussion of the results.

CHAPTER V

DISCUSSIONS

5.1. Introduction

In this chapter, the findings of the study are discussed based on the research questions. The chapter also provides a discussion on the limitations of the study and implications for theory, implications for practice, recommendations for future studies and a conclusion.

5.2. Relationship between sense of belonging, adjustment and the intention to dropout of university

The results revealed a statistically significant relationship between sense of belonging, adjustment and the intention to dropout of university. The results are in line with previous studies which revealed the relationship between sense of belonging and intention to dropout of university (Fine, 1991; Heisserer & Parrete, 2002; Wehlage, 1989). Strayhorn (2012) also found that sense of belonging is associated with students' intention to dropout of university or to continue enrolment. Furthermore, Strayhorn (2012, 2016) found that if the university context does not provide the student with the needs to belong, the student will strive and prioritise the need to belong or dropout of the institution to seek such needs elsewhere.

Strayhorn's (2012, 2016) findings are reflected in the study by Leonhardt (2005), who also reported that a number of students drop out of university due to lack of belonging needs. The ability of a student to develop a sense of belonging within a learning environment has been recognised by O'keeffe (2013) as an important factor which determines whether the student persists or drops out before completion.

According to Alkan (2016), sense of belonging is related to the feeling of or the intention to drop out of a learning institution. These findings are similar to those obtained in the current study, which revealed an association between sense of belonging and the intention

to drop out of university. These results contribute to the existing literature by further demonstrating the link between sense of belonging and the intention to dropout. The relationship between sense of belonging and the intention to drop out of university could be explained as follows: when students have a gratified sense of belonging to their university, they are less likely to develop intentions to dropout, however, when they have a low sense of belonging to the university, they are more likely to develop intentions to drop out of university. Thus, the results indicate that a change in sense of belonging to university will result in a change in the intention to dropout.

The results further suggest that the relationship between sense of belonging and the intention to dropout is important since it may determine whether students succeed at university or not. Studies have also revealed that lack of sense of belonging is a contributing factor to student dropout (Just, 1999; Swail et al., 2003; Zea et al., 1997). Assisting undergraduate students to develop a sense of belonging to university will, therefore, lessen or decrease their intentions to dropout.

The relationship between adjustment and the intention to dropout was also tested in this study. The results revealed a statistically significant relationship between adjustment and the intention to dropout. Tinto (1993) states that adjusting to university is important in order for students to complete their tertiary education. According to Tinto (1993), adjustment difficulties are related to students' intentions to drop out of the university. In addition, Tinto (1987) points out that when students perceive their relationship with the university context to be insignificant, they are likely to withdraw from the institution. Lowe and Cook (2003) found that 20% to 30% of students experienced adjustment difficulties and that this contributed to dropout.

Gerdes (1986) also found that score decline on adjustment was significantly correlated with increased dropout. Additionally, and in line with the results of the current study, several studies have also revealed that adjustment to university is related to the intention to drop out of university, and that students who have adjustment difficulties, are at greater risk of dropping out (Daugherty & Lane, 1999; Gerdes & Mallinckrodt, 1994; Mohamed, 2012; Wintre & Bowers, 2007).

The current study is in line with previous research which revealed that adjustment to university is related to the intention to dropout. These results suggest that students' adjustment to university is important for their educational success and that adjustment could determine whether they dropout of university or continue with their studies. This is an indication that adjustment difficulties to the university predisposes students to dropping out of university, whereas a successful adjustment may lead to persistence. For example, if an undergraduate student adjusts to the academic workload and the method of teaching and learning at university, which is different from high school, then there is a chance that the student will continue with their studies. However, if the student fails to adjust to these learning conditions, then he or she may potentially develop the intention to drop out of university. The findings of this study suggest that an alteration in students' adjustment to university will have an effect on their intention to drop out of university. There is, need, therefore, for institutions of higher learning to assist students to adjust to the university in which they are a part.

5.3. Sense of belonging and adjustment as predictors of the intention to dropout of university

One of the objectives of this study was to investigate if sense of belonging and adjustment significantly predict the intention to dropout. The results revealed that sense of belonging and adjustment significantly predict the intention to dropout. This finding is similar to results obtained by Hausmann et al. (2009) and Kasse (1994). Kasse (1994) tested the ability of SACQ to predict dropout and found that some elements of adjustment strongly predict dropout. In addition, Hausmann et al. (2009) tested the effect of sense of belonging on intentions to persist and found that sense of belonging was a predictor of intentions to persist. The findings of the current study corroborate those of these researchers. Furthermore, the findings suggest that students' intentions to dropout of university may be explained by sense of belonging and adjustment to university. The findings also suggest that sense of belonging and adjustment play a critical role in the success of students' education since they have an effect on students' intention to dropout. This means that the more students feel they belong and the more they are well adjusted to university, the more they are likely not to have high intentions of dropping out, if at all they have.

5.4. Relationship between sense of belonging and intention to dropout with socioeconomic status as a moderator variable

The third hypothesis sought to test whether socioeconomic status will moderate the relationship between sense of belonging and the intention to dropout. The results revealed that socioeconomic status does not moderate the relationship between sense of belonging and the intention to dropout. This means that the third hypothesis could not be confirmed.

According to Ostrove and Long (2007) and Soria and Stebleton (2013), the socioeconomic status of students is related to sense of belonging at university and has an effect

on their success. It was found in the current study that socioeconomic status does not moderate the relationship between sense of belonging and the intention to dropout. An explanation for these results could be that undergraduate students at UNISA perceive belonging to university to be more important than their socioeconomic status. For example, a student may come from a low socioeconomic background and persist up to completion of his or her studies due to the connection or the feeling of belonging that he or she has towards the institution. In such case, socioeconomic status becomes an unimportant factor or determinant of success. Strayhorn (2012) supports this by demonstrating that sense of belonging is a psychological need desired by all students in the learning environment irrespective of their background characteristics. In the context of the current study, this could be an indication that sense of belonging to university is more salient to the students than their socioeconomic status. Hence, socioeconomic status could not moderate the relationship between sense of belonging and the intention to dropout.

5.6. Limitations of the study

As is the case with other studies, certain limitations were encountered in the course of this study. Thus, interpretations of findings should be done within the context of the study and may not be generalised to other universities. The limitations were as follows: Firstly, instruments used in the study were adapted to fit the context. This could have affected the internal consistency of the instruments.

Secondly, an online survey was used to collect data with self-report measures. Evidence shows that there is a possibility of response bias in studies that make use of self-report measures (Caputo, 2017). As with other studies that make use of self-report measures,

there is a possibility that response bias could have occurred, and which may have affected the quality of the data.

Thirdly, there was a low response rate from respondents. The survey was sent to 76 742 students through email and 955 responses received. The number of respondents who completed the survey was relatively low compared to the number of students who received the questionnaire. This could have reduced the statistical power and ability to find other significant differences and relationship between criterion and dependent variables (Sommer, 2013).

Fourthly, the study was conducted in one university with undergraduate students. Thus, the results cannot be generalised to other universities and groups of students.

Lastly, the study data was collected through a cross-sectional survey. Cross-sectional surveys have limitations in that data is collected only within a specific point in time, and therefore, does not allow the researcher to study and understand behaviour over a period of time. This means that data collected with cross-sectional surveys only present a snapshot of results, which cannot be guaranteed to be representative because the situation may provide different results if another time frame to collect data is chosen (Levin, 2006). Results obtained through cross-sectional surveys cannot assist in determining cause and effect (Levin, 2006).

5.7. Implications for theory

Strayhorn's (2012) theory of belonging, as presented in Chapter II discussed focuses on the importance of sense of belonging in educational settings. According to Strayhorn (2012), sense of belonging is important in the success of students at university level. Lack of sense of belonging may result in negative outcomes, such as dropout, while its presence could result in positive outcomes such as persistence (Strayhorn, 2012).

The results revealed there is a relationship between sense of belonging and the intention to dropout. The results also revealed that sense of belonging significantly predicts the intention to dropout. Thus, the researcher was able to test and establish the role of sense of belonging on students' intentions to dropout. In addition, it was revealed that sense of belonging is an important psychological factor in the success of students.

According to Strayhorn (2012), sense of belonging is a basic human need and applies to all human beings. All people want to feel cared about, needed, valued and connected to others (Strayhorn, 2012). The objective of the study was to establish if the relationship between sense of belonging and the intention to dropout could be moderated by socioeconomic status. However, the results of the current study could not prove that background characteristics (i.e. socioeconomic status) moderate the relationship between sense of belonging and the intention to dropout. Tinto (1993) found that the socioeconomic status of students has an effect on their intention to dropout. However, Strayhorn's (2012) theory could not prove this through a moderation model. Therefore, future research could explore Strayhorn's (2012) theory further by testing a moderation model and investigate discrepancies between Strayhorn's (2012) theory of belonging and Tinto's (1993) theory of institutional departure.

5.8. Implications for practice

The results of the study revealed that sense of belonging and adjustment predict the intention to dropout. Based on these results, it is recommended that university practitioners in charge of policy and planning consider the importance of sense of belonging and adjustment to university since they are essential for the success of students. This means that during the policy planning phase, practitioners need to consider initiating programmes that will make students find a fit between themselves and the university. For example, universities can make

a provision for lecturers and support staff to establish student networking forums and social support groups, which could serve as a platform for students to share their university experience. Universities can also encourage students to join youth formations such as such Student Representative Council (SRC) organisations and sporting clubs.

Assisting students to adjust and find belonging to university requires diverse approaches since a single approach does not work with all students (Strayhorn, 2012; Tinto, 1993). Universities could also consider graduate-student mentorship support for undergraduate students. Mentorship support has not been extensively applied in higher education, and universities associate mentorship with workplace settings rather than learning environments (Rangara, 2015). Thus, there is a need for universities to reconceptualise their approach in terms of mentorship support in the learning environment. For example, instead of exposing students to work-based mentorship programmes, institutions of higher learning could promote academic mentorship support by appointing graduates within the same stream of qualification as students to lead mentorship support programmes. Such support programmes could serve as a platform for mentees (i.e. students) to share their concerns, and mentors (i.e. graduates) to share their experiences and guide students. For example, a mentor may share tips and guides on how students should approach a particular module.

These graduate-to-student mentorship support programmes may take place either online or through face-to-face interaction where a mentor is allocated a certain number of students to support. Mentorship programmes are of essential value because they assist students with adjustment to university and persistence decisions (Borden, Burton, Evenbeck, & Williams, 1997; Muckert, 2002; Pike et al., 2000). In addition, Craig (2018) claims that mentorship programmes are important because they help with building students' sense of belonging to the university.

Universities could also initiate a student television network accessible through a link. The television network could be hosted by students from different faculties. In addition, the television network can cover a broad range of topics which may include, for example, topics such as coping with exam-induced anxiety, the importance of study groups, tips on how to manage academic workload and other academic-related topics. The television network could also broadcast important events taking place at university or at regional centres of the institution. Ivala (2004) is of the view that television networks are important because they could assist students to understand their learning environment better in terms of social groupings, cultural diversity and linguistics. In addition, apart from the educational value that they provide, television networks are important because they forge unity by virtue of the ability of students from different environments to watch the same programmes and be informed of the same events and under the same educational circumstances (Aniebona, 1990; Ivala, 2004; McQuail & Siune, 1998), thus creating a sense of belonging to one learning community (Ivala, 2004).

Universities also need to develop policies that promote cultural diversity and inclusivity, which will assist students to find identification and affiliation to a specific group of their choice in a learning community. For example, if the university provides opportunities for a culture of diversity and inclusivity through the television network, university events or social media, students may find connections with their peers with whom they identify (A. Singh, 2018). This could yield positive results by boosting their sense of belonging and adjustment to the university, thus enabling them to complete their studies.

The findings emphasise the importance of students' adjustment to university and necessitate universities to take the initiative to ensure that students are well adjusted to university. Adjustment to university could further be facilitated by introducing students to various academic departments through orientation programmes so that they identify with their

respective academic departments and develop an attachment to the institution through an academic department. Moreover, universities could increase online communication platforms for students as a way of widening students' choices of identifying with a particular university group, which could assist in satisfying their adjustment needs. In addition, universities should plan extracurricular activities for students and encourage them to take part in such activities. According to Ahmadi (2016), extracurricular activities are essential in helping students adjust to university.

Heisserer and Parrete (2002, p. 6) are of the opinion that “the single most important factor in advising students who are at-risk is helping them feel that they are being cared for by the institution”. In addition, Singh (2018) posits that students experience psychological changes during the transition to university and should be educated about the psychological changes that they may undergo. Universities may consider multiple ways of offering students with psychological support. For example, in order to prepare students, and as opposed to the traditional manner of providing one-on-one counselling services to students, university could supply each student with a manual about coping skills and ways of dealing with the transition and managing academic challenges. In addition, the manual could include contact details of various university support groups and student unions, which students could use if they need further assistance from university personnel.

Majority of participants who participated in study were first-generation students. First-generation students represent the first generation in their family to attend university. Jean (2010) argues that the transition to university is difficult for students; however, the transition is even more difficult for first-generation students. This is because first-generation students are confronted with a decision to break the family tradition by attending university and are often not prepared for the challenges that they would encounter at university (Dewall, 2005). In addition, first-generation students often find that their families do not understand their

academic challenges and, therefore, experience conflict regarding their decision to attend university (Dewall, 2005). Olenchak and Hebert (2002) state that first-generation students often have to renegotiate their decision to attend university with their families in order to successfully persist to graduation.

Due to the educational background of their families, first-generation students have been found to have lower adjustment levels to university (Hertel, 2010; Sax, Gilmartin, Keup, Dicrisi, & Bryant, 2000). In addition, Lippincott and German (2007) argue that first-generation students possess unique counselling needs related to adjustment to university life and family background challenges. Stebleton, Soria, and Huesman (2014) also found that first-generation students tend to feel less likely to belong to university compared to continuing generation students due to their background challenges and those that they face at university.

First-generation students have to acclimatise and motivate their families about their decision to attend university. This may negatively affect the relationship between the student and the family or change how the family relates and interacts with the student (Dewall, 2005; Jean, 2010). Thus, the student may experience challenges with making identity change due to inadequate support from family members (Jenkins, Belanger, Connally, Boals, & Duron, 2013).

First-generation students tend to be academically unprepared due to their poor schooling background and family characteristics (Jenkins, Miyazaki, & Janosik, 2009). Thus, first generation students tend not to be as academically engaged as their continuing generation student counterparts (Kuh, 2008). London (1989) argues that the transition to university is challenging for first-generation students because it requires them to deal with issues relating to family, social and cultural transitions simultaneously. This may make their adjustment to

university difficult and affect their sense of belonging to university (Hertel, 2010; Lippincott & German, 2007; Soria & Stebleton, 2013).

There is, therefore, a need for universities to take the initiative and cater for the needs of first-generation students during their transition to the university. This could include encouraging first-generation students to participate in orientation programmes specifically dedicated to first-generation students (Jean, 2010). In addition, there is need for administrators to identify factors that may have a negative effect on the transition of first-generation students to university and develop measures to address them. This could include, for example, academic support centres for first-generation students, which will focus on assisting first-generation students with their transitional needs at university.

5.9. Recommendations for future research

As is the case with other studies, and as discussed earlier in this chapter, certain limitations were also encountered. Future research could investigate the following aspects, which were not considered in this study:

First, a quantitative approach was used to investigate the effect of sense of belonging and adjustment on students' intention to drop out of university. Future researchers could expand this study further by using qualitative or mixed method approaches to inquiry.

Second, the study focused on the relationship between sense of belonging and the intention to dropout and with socioeconomic status as a moderator variable. Future studies could investigate the relationship between sense of belonging and the intention to dropout and with socioeconomic status as a mediator variable. Alternatively, future studies could test for a moderated mediation with socioeconomic status as moderator variable and adjustment as a mediator between sense of belonging and the intention to dropout.

Third, several respondents identified themselves as coming from historically disadvantaged backgrounds. Future research could focus on equating the sample in order to run the analysis, which may yield robust results.

Fourth, there are various instruments to measure sense of belonging, adjustment and intention to dropout from university. Future researchers could consider using different instruments as this may generate different and insightful results and findings.

Finally, the study was conducted with a sample from one university and with undergraduate students. Future researchers could replicate this study with another undergraduate cohort from another institution of higher learning. This could assist with the generalisability of results on the effect of sense of belonging and adjustment on students' intention to dropout.

5.10. Conclusion

This study has provided evidence that sense of belonging and adjustment are related to students' intention to dropout of university. The study has further proved that sense of belonging and adjustment predict the intention to dropout of university. However, it could not be proved if socioeconomic status moderates the relationship between sense of belonging and the intention to dropout. Nevertheless, these findings highlight the importance of understanding the role of psychological factors in the academic success of students. Furthermore, implications for practice, suggestions on ways to support students to develop a sense of belonging and adjustment to their university were provided in the study. Strategies or methods which universities could implement as measures for bolstering students' sense belonging and adjustment were also provided. This means that universities and educators who want to understand the role of psychological factors, in particular, the sense of belonging and adjustment, can refer to this study and also use the findings to inform policy change.

5.11. Summary of chapter

This chapter has provided the findings of the study based on the research questions, the limitations of the study and implications for theory. The chapter has also provided a discussion on implications for practice, recommendations for future research studies and the conclusion.

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List of appendices

Appendix A

Information letter

Information letter

Dear student,

My name is Bongani Mtshweni and I am conducting a study on the experiences of students at university on sense of belonging, adjustment and the intention to dropout. To do this, I am conducting a survey among undergraduate students using questionnaires developed for this purpose. The purpose of this study is to understand the relationship between sense of belonging and adjustment and the intention to drop out of university.

I am writing to request your participation in the research study. Participation in the study involves completing questionnaires containing items about your university experience as a student. Permission to conduct the study and ethical clearance were requested and obtained from the Department of Psychology Ethics Committee, as well as the UNISA Research Permission Sub-committee of the Senate Research, Innovation, Postgraduate Degrees and Commercialisation Committee (Reference number 2018_RPSC_036_RS).

Please note that the information you provide will be kept strictly confidential and will be analysed on group level. This information will also help develop initiatives to improve the university experience and graduation rates of students.

If you have any questions about this study, please contact Bongani Mtshweni at dbongz325@gmail.com or Dr Fortunate Silinda at silinf@unisa.ac.za

Your time and participation in the study are highly valued. Thank you!

To take part in the survey, please click on the link provided below:

<https://www.surveymonkey.com/r/3LWQBF9>

Kind regards,

Bongani Mtshweni

Appendix B

Consent form for participants

I, the participant, understand that this study involves a research study for a masters' dissertation conducted by Bongani Mtshweni under the supervision of Dr. Fortunate Silinda, a lecturer in the Department of Psychology at UNISA.

I understand that my participation in this study is completely voluntary and that I may refuse to participate or withdraw my consent to participate without penalty at any time before submitting my responses. I understand that my identity and responses on the questionnaires will be kept confidential and that only the principal investigator (Bongani Mtshweni) and the supervisor referred above will have access to the information collected during this study. I also understand that the data collected will be reported in aggregate forms and that none of my personal information, name or identity will be published or used in any research reports or publications. I also understand that the data collected will be safely stored in a password protected device.

I understand that my participation in this study will involve answering questions about my university experience. I also understand that I will be asked to complete four short questionnaires including a demographic questionnaire, and that the survey will take approximately 15-20 minutes to complete. I understand that participating in the study is voluntary and that in case of discomfort, I may withdraw my consent to participate at any time before submitting my survey responses and without any penalty. I am also aware that there will be no compensation/rewards for participating in the survey.

I understand that I may contact the principal investigator or the supervisor in case I need any

form of psychological assistance ~~as a result~~ of participating in the survey, and I understand that the principal investigator will facilitate a referral for me to the UNISA health and wellness centre.

I am aware that if I have any further questions about the study or should I need to ~~be informed~~ about the results of the study, that I may contact Bongani Mtshweni at dbongz325@gmail.com or the supervisor, Dr. Fortunate Silinda at silinf@unisa.ac.za with the reference number: 2018_RPSC_036_RS.

Thank you for your participation in advance!

I, the participant, understand that by clicking the 'OK' option below affirms that I am giving my consent to participate in this research study and that I have read and understood the consent form.

I am 18 years of age or older and voluntarily agree to take part in the survey.

OK	Decline
----	---------

Appendix C

Ethical clearance: Department of Psychology

Ref. No: PERC-17039



Ethical Clearance for M/D students: Research on human participants

The Ethics Committee of the Department of Psychology at Unisa has evaluated this research proposal for a Higher Degree in Psychology in light of appropriate ethical requirements, with special reference to the requirements of the Code of Conduct for Psychologists of the HPCSA and the Unisa Policy on Research Ethics.

Student Name: Vivian Bongani Mtshweni **Student no.** 51416387

Supervisor: Dr Fortunate Silinda
UNISA

Affiliation: Department of Psychology,

Title of project:

The effect of sense of belonging and adjustment on undergraduate students' intention to dropout of university.

The proposal was evaluated for adherence to appropriate ethical standards as required by the Psychology Department of Unisa. The application was approved by the Ethics Committee of the Department of Psychology on the understanding that –

- All ethical requirements regarding informed consent, the right to withdraw from the study, the protection of participants' privacy and confidentiality of the information should be made clear to the participants and adhered to, to the satisfaction of the supervisor;
- Additional clearance will have to be obtained from the Senate Research, Innovation and Higher Degrees committee to confirm that any and all formal procedures that need to be followed to gain access to the participants and to obtain information for

the purposes of research, as required by the institution, have been adhered to, and that the relevant authorities are aware of the scope of the research.

Signed:



Prof. M Papaikonomou

Date: 2017-10-16

[For the Ethics Committee]

[Department of Psychology, Uⁿisa]

The proposed research may now commence with the proviso that:

- 1) *The researcher/s will ensure that the research project adheres to the values and principles expressed in the UNISA Policy on Research Ethics.*
- 2) *Any adverse circumstance arising in the undertaking of the research project that is relevant to the ethicality of the study, as well as changes in the methodology, should be communicated in writing to the Psychology Department Ethics Review Committee.*
- 3) *An amended application should be submitted if there are substantial changes from the existing proposal, especially if those changes affect any of the study-related risks for the research participants.*
- 4) *The researcher will ensure that the research project adheres to any applicable national legislation, professional codes of conduct, institutional guidelines and scientific standards relevant to the specific field of study.*

Please note that research where participants are drawn from Unisa staff, students or data bases requires permission from the Senate Research and Innovation Committee (SENRIC) before the research commences.

Appendix D

Ethical clearance: College of Human Sciences



COLLEGE OF HUMAN SCIENCES RESEARCH ETHICS REVIEW COMMITTEE

13 June 2018

Decision: Ethics Approval from
13 June 2018 to 12 June 2019

Dear Mr V.B
Mtshweni

NHREC Registration # :
Rec240816-052

CREC Reference # :
2018CHS-020
Name : Vivian Bongani
Mtshweni

Student 51416387



Researcher(s): V.B Mtshweni
Department of Psychology
Pretoria, South Africa

Supervisor(s): Dr F. Silinda
Department of Psychology
University of South Africa



The effect of sense of belonging and adjustment on undergraduate students' intention to dropout of university

Qualification: MA (Psychology)

Thank you for the application for research ethics clearance by the Unisa College of Human Sciences Research Ethics Committee for the above mentioned research. Ethics approval is granted for one year.

The medium risk application was reviewed and expedited by the Chair of College of Human Sciences Research Ethics Committee on 13 June 2018 in compliance with the Unisa Policy on Research Ethics and the Standard Operating Procedure on Research Ethics Risk Assessment.

The proposed research may now commence with the provisions that:

1. The researcher(s) will ensure that the research project adheres to the values and principles expressed in the UNISA Policy on Research Ethics.



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2. Any adverse circumstance arising in the undertaking of the research project that is relevant to the ethicality of the study should be communicated in writing to the Department of Psychology Ethics Review Committee.

3. The researcher(s) will conduct the study according to the methods and procedures set out in the approved application.

4. Any changes that can affect the study-related risks for the research participants, particularly in terms of assurances made with regards to the protection of participants' privacy and the confidentiality of the data, should be reported to the Committee in writing, accompanied by a progress report.

5. The researcher will ensure that the research project adheres to any applicable national legislation, professional codes of conduct, institutional guidelines and scientific standards relevant to the specific field of study. Adherence to the following South African legislation is important, if applicable: Protection of Personal Information Act, no 4 of 2013; Children's act no 38 of 2005 and the National Health Act, no 61 of 2003.

6. Only de-identified research data may be used for secondary research purposes in future on condition that the research objectives are similar to those of the original research. Secondary use of identifiable human research data require additional ethics clearance.

7. No field work activities may continue after the expiry date (12 June 2019). Submission of a completed research ethics progress report will constitute an application for renewal of Ethics Research Committee approval.

Note:

The reference number 2018-CHS-020 should be clearly indicated on all forms of communication with the intended research participants, as well as with the Committee

Yours sincerely,


Signature :

Prof. AH Mavhandu-Mudzusi
Chair: CHS Research Ethics Committee
E-mail: mmudza@unisa.ac.za
Tel: (012) 429-2055


Signature:
Professor A Phillips
Executive Dean: CHS



E-mail: Phillip@unisa.ac.za
Tel: (012) 429-6825

Appendix E

Ethical clearance: Senate



**RESEARCH PERMISSION SUB-COMMITTEE (RPSC) OF THE SENATE
RESEARCH, INNOVATION, POSTGRADUATE DEGREES AND
COMMERCIALISATION COMMITTEE (SRIPCC)**

30 August 2018

**Decision: Research Permission
Approval from 1 September 2018
until 28 February 2019.**

Ref #: 2018_RPSC_036_RS
Mr. Bongani Vivian Mtshweni
Student #: 51416387
Staff #: N/A

Principal Investigator:

Mr. Bongani Vivian Mtshweni
Department of Psychology
School of Social Sciences
College of Human Sciences
Unisa
dbongz325@gmail.com, 078 323 2829

Supervisor: Ms. Fortunate Silinda, silinf@unisa.ac.za, 012 429 8244/ 083 576 8456

The effect of sense of belonging and adjustment on undergraduate students' intention to dropout of university.

Your application regarding permission to conduct research involving UNISA employees, students and data in respect of the above study has been received and was considered by the Research Permission Subcommittee (RPSC) of the UNISA Senate, Research, Innovation, Postgraduate Degrees and Commercialisation Committee (SRIPCC) on 23 August 2018.

It is my pleasure to inform you that permission for the study has been granted. You may:

1. Send an online survey link to the students registered for both diplomas and junior degrees at Unisa, through the gatekeeping assistance of ICT.
2. The Committee suggested that you should consider sending a survey link to a sufficiently large random sub-sample from the specified total population taking into account the required sample size, but adjusting for expected nonresponse. While the process will allow the researcher to obtain the required minimum sample size, it will also



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protect students from possible research fatigue. The researcher may discuss this approach with Dr. Dion van Zyl zylylhjd@unisa.ac.za

You are requested to submit a report of the study to the Research Permission Subcommittee (RPSC@unisa.ac.za) within 3 months of completion of the study.

The personal information made available to the researcher(s)/gatekeeper(s) will only be used for the advancement of this research project as indicated and for the purpose as described in this permission letter. The researcher(s)/gatekeeper(s) must take all appropriate precautionary measures to protect the personal information given to him/her/them in good faith and it must not be passed on to third parties. The dissemination of research instruments through the use of electronic mail should strictly be through blind copying, so as to protect the participants' right of privacy. The researcher hereby indemnifies UNISA from any claim or action arising from or due to the researcher's breach of his/her information protection obligations.

Note:

*The reference number **2018_RPSC_036_RS** should be clearly indicated on all forms of communication with the intended research participants and the Research Permission Subcommittee.*

We would like to wish you well in your research undertaking.

Kind regards,



pp. Dr Retha Visagie – Deputy Chairperson: RPSC

Email: visagrg@unisa.ac.za, Tel: (012) 429-2478

Prof Lessing Labuschagne – Chairperson: RPSC

Email: llabus@unisa.ac.za, Tel: (012) 429-6368



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Appendix F

Intention to dropout questionnaire

2.

The following section measures your university experience. Please indicate how the following statements apply to you based on your university experience.

1. How confident are you that this is the right university for you?

- | | |
|--|--|
| <input type="radio"/> Very unconfident | <input type="radio"/> Somewhat confident |
| <input type="radio"/> Somewhat unconfident | <input type="radio"/> Very confident |
| <input type="radio"/> Neutral | |

2. How much thought have you given to stopping your education at UNISA?

- | | |
|---|--|
| <input type="radio"/> Very little thought | <input type="radio"/> Some thought |
| <input type="radio"/> Little thought | <input type="radio"/> A lot of thought |
| <input type="radio"/> Neutral | |

3. How likely is it that you will re-register at UNISA next semester?

- | | |
|---|-----------------------------------|
| <input type="radio"/> Very unlikely | <input type="radio"/> Likely |
| <input type="radio"/> Somewhat unlikely | <input type="radio"/> Very likely |
| <input type="radio"/> Neutral | |

4. How likely is that you will earn a degree from UNISA?

- | | |
|---|---------------------------------------|
| <input type="radio"/> Very unlikely | <input type="radio"/> Somewhat likely |
| <input type="radio"/> Somewhat unlikely | <input type="radio"/> Very likely |
| <input type="radio"/> Neutral | |

5. How supportive is your family of your pursuit of a university degree in terms of their encouragement?

- | | |
|---|---|
| <input type="radio"/> Very unsupportive | <input type="radio"/> Somewhat supportive |
| <input type="radio"/> Somewhat unsupportive | <input type="radio"/> Very supportive |
| <input type="radio"/> Neutral | |

6. At this moment in time, how strong would you say your commitment is to earning a university degree, at UNISA or another university?

- | | |
|-------------------------------------|---------------------------------------|
| <input type="radio"/> Very weak | <input type="radio"/> Somewhat strong |
| <input type="radio"/> Somewhat weak | <input type="radio"/> Very strong |
| <input type="radio"/> Neutral | |

7. When you think of the people who mean the most to you (friends and family), how disappointed do you think they will be if you quit university?

- | | |
|---|---|
| <input type="radio"/> Not at all disappointed | <input type="radio"/> Somewhat disappointed |
| <input type="radio"/> Not very disappointed | <input type="radio"/> Very disappointed |
| <input type="radio"/> Neutral | |

8. At this moment in time, how certain are you that you will earn a university degree?

- | | |
|--|--|
| <input type="radio"/> Very uncertain | <input type="radio"/> Somewhat certain |
| <input type="radio"/> Somewhat uncertain | <input type="radio"/> Very certain |
| <input type="radio"/> Neutral | |

9. How strong is your intention to persist in your pursuit of the degree at UNISA?

- | | |
|-------------------------------------|---------------------------------------|
| <input type="radio"/> Very weak | <input type="radio"/> Somewhat strong |
| <input type="radio"/> Somewhat weak | <input type="radio"/> Very strong |
| <input type="radio"/> Neutral | |

Rectangular Snip

Appendix G

Sense of belonging questionnaire

3.

The following section enquires about your level of sense of belonging at UNISA. Please rate the following statements on how true they are to you based on your university experience.

10. I feel like a part of my university.

- | | |
|---------------------------------------|---------------------------------------|
| <input type="radio"/> Not at all true | <input type="radio"/> Very true |
| <input type="radio"/> Slightly true | <input type="radio"/> Completely true |
| <input type="radio"/> Moderately true | |

11. Most lecturers at my university are interested in people like me.

- | | |
|---------------------------------------|---------------------------------------|
| <input type="radio"/> Not at all true | <input type="radio"/> Very true |
| <input type="radio"/> Slightly true | <input type="radio"/> Completely true |
| <input type="radio"/> Moderately true | |

12. Sometimes I feel as if I don't belong to my university.

- | | |
|---------------------------------------|---------------------------------------|
| <input type="radio"/> Not at all true | <input type="radio"/> Very true |
| <input type="radio"/> Slightly true | <input type="radio"/> Completely true |
| <input type="radio"/> moderately true | |

13. There is at least one lecturer that I can talk to in my university if I have a problem.

- | | |
|---------------------------------------|---------------------------------------|
| <input type="radio"/> Not all true | <input type="radio"/> Very true |
| <input type="radio"/> Slightly true | <input type="radio"/> Completely true |
| <input type="radio"/> Moderately true | |

14. Lecturers in my university are not interested in people like me.

- | | |
|---------------------------------------|---------------------------------------|
| <input type="radio"/> Not at all true | <input type="radio"/> Very true |
| <input type="radio"/> Slightly true | <input type="radio"/> Completely true |
| <input type="radio"/> Moderately true | |

15. I am included in lots of activities at my university.

- | | |
|---------------------------------------|---------------------------------------|
| <input type="radio"/> Not at all true | <input type="radio"/> Very true |
| <input type="radio"/> Slightly true | <input type="radio"/> Completely true |
| <input type="radio"/> Moderately true | |

16. I feel very different from most other students at my university.

☐ Not at all true

☐ Very true

☐ Slightly true

☐ Completely true

☐ Moderately true

17. I can really be myself at my university.

☐ Not at all true

☐ Very true

☐ Slightly true

☐ Completely true

☐ Moderately true

18. I wish I were in a different university.

☐ Not at all true

☐ Very true

☐ Slightly true

☐ Completely true

☐ Moderately true

19. I feel proud to belong to my university.

☐ Not at all true

☐ Very true

☐ Slightly true

☐ Completely true

☐ Moderately true

Appendix H

Adjustment questionnaire

4.

The following section measures your level of adjustment to the university. Please indicate your level of agreement with the following statements.

20. I know why I'm in university.

- | | |
|--|---|
| <input type="radio"/> Strongly agree | <input type="radio"/> Disagree |
| <input type="radio"/> Agree | <input type="radio"/> Strongly disagree |
| <input type="radio"/> Neither agree nor disagree | |

21. My academic goals are well defined.

- | | |
|---|---|
| <input type="radio"/> Strongly agree | <input type="radio"/> Disagree |
| <input type="radio"/> Agree | <input type="radio"/> Strongly disagree |
| <input type="radio"/> Neither agree or disagree | |

22. Getting a university degree is important to me.

- | | |
|--|---|
| <input type="radio"/> Strongly agree | <input type="radio"/> Disagree |
| <input type="radio"/> Agree | <input type="radio"/> Strongly Disagree |
| <input type="radio"/> Neither agree nor disagree | |

23. Lately I have been having doubts regarding the value of tertiary education.

- | | |
|--|---|
| <input type="radio"/> Strongly agree | <input type="radio"/> Disagree |
| <input type="radio"/> Agree | <input type="radio"/> Strongly disagree |
| <input type="radio"/> Neither agree nor disagree | |

24. I am enjoying my academic work at university.

- | | |
|--|---|
| <input type="radio"/> Strongly agree | <input type="radio"/> Disagree |
| <input type="radio"/> Agree | <input type="radio"/> Strongly Disagree |
| <input type="radio"/> Neither agree nor disagree | |

25. I have been keeping up to date with my academic work.

- | | |
|---|---|
| <input type="radio"/> Strongly agree | <input type="radio"/> Disagree |
| <input type="radio"/> Agree | <input type="radio"/> Strongly disagree |
| <input type="radio"/> Neither agree or disagree | |

26. I am not working as hard as I should at my coursework.

- | | |
|--|---|
| <input type="radio"/> Strongly agree | <input type="radio"/> Disagree |
| <input type="radio"/> Agree | <input type="radio"/> Strongly disagree |
| <input type="radio"/> Neither agree nor disagree | |

27. I really haven't had much motivation for studying lately.

- | | |
|--|---|
| <input type="radio"/> Strongly agree | <input type="radio"/> Disagree |
| <input type="radio"/> Agree | <input type="radio"/> Strongly disagree |
| <input type="radio"/> Neither agree nor disagree | |

28. I am finding academic work at university difficult.

- | | |
|--|---|
| <input type="radio"/> Strongly agree | <input type="radio"/> Disagree |
| <input type="radio"/> Agree | <input type="radio"/> Strongly disagree |
| <input type="radio"/> Neither agree nor disagree | |

29. I am satisfied with the level at which I am performing academically.

- | | |
|--|---|
| <input type="radio"/> Strongly agree | <input type="radio"/> Disagree |
| <input type="radio"/> Agree | <input type="radio"/> Strongly Disagree |
| <input type="radio"/> Neither agree nor disagree | |

30. I'm not really smart enough for academic work I am expected to be doing now.

- | | |
|---|---|
| <input type="radio"/> Strongly agree | <input type="radio"/> Disagree |
| <input type="radio"/> Agree | <input type="radio"/> Strongly disagree |
| <input type="radio"/> Neither agree or disagree | |

31. I haven't been very efficient in the use of study time lately.

- | | |
|---|---|
| <input type="radio"/> Strongly agree | <input type="radio"/> Disagree |
| <input type="radio"/> Agree | <input type="radio"/> Strongly disagree |
| <input type="radio"/> Neither agree or disagree | |

32. Recently I have had trouble concentrating when I try to study.

- | | |
|--|---|
| <input type="radio"/> Strongly agree | <input type="radio"/> Disagree |
| <input type="radio"/> Agree | <input type="radio"/> Strongly Disagree |
| <input type="radio"/> Neither agree nor disagree | |

33. Lately I haven't been sleeping very well.

- | | |
|---|---|
| <input type="radio"/> Strongly agree | <input type="radio"/> Disagree |
| <input type="radio"/> Agree | <input type="radio"/> Strongly disagree |
| <input type="radio"/> Neither agree or disagree | |

34. I am having a lot of trouble getting started on assignments.

- | | |
|--|---|
| <input type="radio"/> Strongly agree | <input type="radio"/> Disagree |
| <input type="radio"/> Agree | <input type="radio"/> Strongly Disagree |
| <input type="radio"/> Neither agree nor disagree | |

35. I am satisfied with a variety of modules available at university.

- | | |
|---|---|
| <input type="radio"/> Strongly agree | <input type="radio"/> Agree |
| <input type="radio"/> Disagree | <input type="radio"/> Strongly disagree |
| <input type="radio"/> Neither agree or disagree | |

36. I am satisfied with the quality of modules available at university.

- | | |
|--|---|
| <input type="radio"/> Strongly agree | <input type="radio"/> Disagree |
| <input type="radio"/> Agree | <input type="radio"/> Strongly Disagree |
| <input type="radio"/> Neither agree nor disagree | |

37. I am satisfied with the modules that I have selected for this semester.

- | | |
|--|---|
| <input type="radio"/> Strongly agree | <input type="radio"/> Disagree |
| <input type="radio"/> Agree | <input type="radio"/> Strongly disagree |
| <input type="radio"/> Neither agree nor disagree | |

38. I'm quite satisfied with my academic situation at university.

- | | |
|--|---|
| <input type="radio"/> Strongly agree | <input type="radio"/> Disagree |
| <input type="radio"/> Agree | <input type="radio"/> Strongly Disagree |
| <input type="radio"/> Neither agree nor disagree | |

39. I feel that I fit in well as part of the university environment.

- | | |
|--|---|
| <input type="radio"/> Strongly agree | <input type="radio"/> Disagree |
| <input type="radio"/> Agree | <input type="radio"/> Strongly Disagree |
| <input type="radio"/> Neither agree nor disagree | |

40. I am adjusting well to university.

- ☐ Strongly agree
☐ Agree
☐ Neither agree nor disagree

- ☐ Disagree
☐ Strongly disagree

41. I have several close ties at university.

- ☐ Strongly agree
☐ Agree
☐ Neither agree nor disagree

- ☐ Disagree
☐ Strongly disagree

42. I have some good friends or acquaintances at university with whom I can talk about any problems I may have.

- ☐ Strongly agree
☐ Agree
☐ Neither agree nor disagree

- ☐ Disagree
☐ Strongly disagree

43. I am enjoying my academic work at university.

- ☐ Strongly agree
☐ Agree
☐ Neither agree nor disagree

- ☐ Disagree
☐ Strongly disagree

44. I am pleased now about my decision to attend this university in particular.

- ☐ Strongly agree
☐ Agree
☐ Neither agree nor disagree

- ☐ Disagree
☐ Strongly disagree

45. I have been nervous lately.

- ☐ Strongly agree
☐ Agree
☐ Neither agree nor disagree

- ☐ Disagree
☐ Strongly disagree

46. Lately I have been feeling moody a lot.

- | | |
|--|---|
| <input type="radio"/> Strongly agree | <input type="radio"/> Disagree |
| <input type="radio"/> Agree | <input type="radio"/> Strongly disagree |
| <input type="radio"/> Neither agree nor disagree | |

47. I haven't been able to control my emotions very well lately.

- | | |
|--|---|
| <input type="radio"/> Strongly agree | <input type="radio"/> Disagree |
| <input type="radio"/> Agree | <input type="radio"/> Strongly disagree |
| <input type="radio"/> Neither agree nor disagree | |

48. I've given a lot of thought lately to whether I should ask for help from a psychologist/counselor

- | | |
|--|---|
| <input type="radio"/> Strongly agree | <input type="radio"/> Disagree |
| <input type="radio"/> Agree | <input type="radio"/> Strongly disagree |
| <input type="radio"/> Neither agree nor disagree | |

49. I have been getting angry too easily lately.

- | | |
|--|---|
| <input type="radio"/> Strongly agree | <input type="radio"/> Disagree |
| <input type="radio"/> Agree | <input type="radio"/> Strongly disagree |
| <input type="radio"/> Neither agree nor disagree | |

50. Sometimes my thinking gets confused too easily.

- | | |
|--|---|
| <input type="radio"/> Strongly agree | <input type="radio"/> Disagree |
| <input type="radio"/> Agree | <input type="radio"/> Strongly disagree |
| <input type="radio"/> Neither agree nor disagree | |

51. I worry a lot about my university expenses.

- | | |
|--|---|
| <input type="radio"/> Strongly agree | <input type="radio"/> Disagree |
| <input type="radio"/> Agree | <input type="radio"/> Strongly disagree |
| <input type="radio"/> Neither agree nor disagree | |

52. I am experiencing a lot of difficulty coping with the stress imposed upon me in university.

- | | |
|--|---|
| <input type="radio"/> Strongly agree | <input type="radio"/> Disagree |
| <input type="radio"/> Agree | <input type="radio"/> Strongly disagree |
| <input type="radio"/> Neither agree nor disagree | |

53. I have felt tired much of the time lately.

- ☐ Strongly agree
☐ Agree
☐ Neither agree nor disagree

- ☐ Disagree
☐ Strongly disagree

54. My appetite has been good lately.

- ☐ Strongly agree
☐ Agree
☐ Neither agree nor disagree

- ☐ Disagree
☐ Strongly disagree

55. I have been having a lot of headaches lately.

- ☐ Strongly agree
☐ Agree
☐ Neither agree nor disagree

- ☐ Disagree
☐ Strongly disagree

56. I've lost too much weight recently.

- ☐ Strongly agree
☐ Agree
☐ Neither agree nor disagree

- ☐ Disagree
☐ Strongly disagree

57. I haven't been sleeping very well.

- ☐ Strongly agree
☐ Agree
☐ Neither agree nor disagree

- ☐ Disagree
☐ Strongly disagree

58. I have been feeling in good health lately.

- ☐ Strongly agree
☐ Agree
☐ Neither agree nor disagree

- ☐ Disagree
☐ Strongly disagree

59. I am pleased now about my decision to go to university.

- ☐ Strongly agree
☐ Agree
☐ Neither agree nor disagree

- ☐ Disagree
☐ Strongly disagree

60. Lately I have been giving a lot of thought to dropping out of university altogether.

- | | |
|--|---|
| <input type="radio"/> Strongly agree | <input type="radio"/> Disagree |
| <input type="radio"/> Agree | <input type="radio"/> Strongly disagree |
| <input type="radio"/> Neither agree nor disagree | |

61. I sometimes find myself thinking about taking a break from my studies.

- | | |
|--|---|
| <input type="radio"/> Strongly agree | <input type="radio"/> Disagree |
| <input type="radio"/> Agree | <input type="radio"/> Strongly disagree |
| <input type="radio"/> Neither agree nor disagree | |

62. I am pleased now about my decision to attend this university in particular.

- | | |
|--|---|
| <input type="radio"/> Strongly agree | <input type="radio"/> Disagree |
| <input type="radio"/> Agree | <input type="radio"/> Strongly disagree |
| <input type="radio"/> Neither agree nor disagree | |

63. I wish I were at another university.

- | | |
|--|---|
| <input type="radio"/> Strongly agree | <input type="radio"/> Disagree |
| <input type="radio"/> Agree | <input type="radio"/> Strongly disagree |
| <input type="radio"/> Neither agree nor disagree | |

64. I expect to stay at this university for my qualification.

- | | |
|--|---|
| <input type="radio"/> Strongly agree | <input type="radio"/> Disagree |
| <input type="radio"/> Agree | <input type="radio"/> Strongly disagree |
| <input type="radio"/> Neither agree nor disagree | |

65. Lately I have been giving a lot of thought of transferring to another university.

- | | |
|--|---|
| <input type="radio"/> Strongly agree | <input type="radio"/> Disagree |
| <input type="radio"/> Agree | <input type="radio"/> Strongly disagree |
| <input type="radio"/> Neither agree nor disagree | |

Appendix I

Demographic questionnaire

5.

This last section enquires about your demographic information. Please indicate your demographics by giving a response that applies to you.

66. How old are you?

67. What is your gender?

☐ Female

☐ Male

☐ Other

68. What population do you belong to?

☐ Black ☐ White

☐ Coloured ☐ Other

☐ Indian

69. Which family's socioeconomic status do you mostly identify with?

☐ Low socioeconomic status

☐ Middle socioeconomic status

☐ High socioeconomic status

70. Select the following statement that best describes the level of education of your parent(s) or guardian(s).

☐ Both my parents hold a bachelors' degree or higher

☐ At least one of my parents holds a bachelors' degree or higher

☐ At least one of my parents has some education after high school or university

☐ Neither of my parents has more than a high-school diploma or degree